	796	692:1..2124		S1913		692:2020..1949		11			30	482) hypothetical protein [Arabidopsis thaliana]
146857	ATU008797	ATL8C9003:1..547	gap2	ATCEA4S27858, ATCEA4C22039_1	97, 89	ATL8C9003:75..424	0.47	g2739360	46	440		(AC002505) unknown protein [Arabidopsis thaliana]
146858	ATU008798	ATL8C3033:1..660	gap2	ATCEA4C26368_1, ATCEA4C51319_1	97, 96	ATL8C3033:51..601	0.41	g818849	46	890	6.4e-74	(U25430) nucleotide pyrophosphatase precursor [Oryza sativa]
146859	ATU008799	ATL8C17239:288..1169	gap2	ATCEA4C1476_1	97			g2651296	46	782	6.5e-44	(AC002336) b-zip DNA-binding protein [Arabidopsis thaliana]
146860	ATU008800	ATL8C21389:3	gap2	ATCEA4S36363	97			g4151321	46	904	3.2e-91	(AF089085)

		5..700										putative auxin efflux carrier protein; AtPIN1 [Arabidopsis thaliana]
146861	ATU008801	ATL8C26128:58..1789	gap2	ATCEA4C46854_1, ATCEA4S26996	97, 92			g2979559	46	266	2.5e-16	(AC003680) putative DNA binding protein [Arabidopsis thaliana]
146862	ATU008802	ATL8C1682:2388..1158	gap2	ATCEA4S33317	97	ATL8C1682:2314..1158	1.00	g4538902	45	310	6.3e-29	(AL049482) rab7-like protein [Arabidopsis thaliana]
146863	ATU008803	ATL8C45695:1..997	gap2	ATCEA4S2368, ATCEA4S2164	97, 90	ATL8C45695:50..626	0.99	g115874	45	647	2.3e-51	SERINE CARBOXYPEPTIDASE III PRECURSOR (CP-WIII) [Triti

												cum aestivum]
146864	ATU008804	ATL8C10745:938..1	gap2	ATCEA4C33094_1, ATCEA4S16130	97, 95	ATL8C10745:880..29	0.95	g2462822	45	161	1.5e-14	(AF000657) hypothetical protein [Arabidopsis thaliana]
146865	ATU008805	ATL8C46220:2308..629	gap2	ATCEA4S19225	97	ATL8C46220:2232..754	0.93	g4038042	45	1444	2.0e-128	(AC005936) putative DNA-binding protein [Arabidopsis thaliana]
146866	ATU008806	ATL8C19729:1..835	gap2	ATCEA4C892_1	97	ATL8C19729:71..537	0.88	g2305107	45	843	7.8e-86	(AF009954) phytoene synthase [Arabidopsis thaliana]
146867	ATU008807	ATL8C7649:1152..1	gap2	ATCEA4C116811_1	97	ATL8C7649:1147..168	0.86	g4558669	45	527	9.3e-31	(AC007063) putative vanadate resistance protei

												n [Arabidopsis thaliana]
146868	ATU008808	ATL8C21473:1..801	gap2	ATCEA4C87313_1	97	ATL8C21473:56..654	0.83	g4455172	45	407	1.2e-34	(AL035521) putative protein [Arabidopsis thaliana]
146869	ATU008809	ATL8C2928:1444..1	gap2	ATCEA4C482_1	97	ATL8C2928:1289..70	0.82	g3810676	45	1647	6.7e-165	(AJ223357) SKOR [Arabidopsis thaliana]
146870	ATU008810	ATL8C1477:465..1	gap2	ATCEA4C127724_1	97	ATL8C1477:237..30	0.77	g4874273	45	445	3.7e-45	(AC007354) Similar to []
146871	ATU008811	ATL8C7349:1056..1	gap2	ATCEA4C47465_1, ATCEA4C8728_1	97, 96	ATL8C7349:883..213	0.76	g4914373	45	749	5.4e-81	(AC007584) putative protein kinase [Arabidopsis thaliana]
146872	ATU008812	ATL8C14364:1159..1	gap2	ATCEA4S27712, ATCEA4S27705	97, 86	ATL8C14364:925..349	0.57	g1657617	45	628	3.8e-61	(U72503) G2p [Arabidopsis thaliana]

146873	ATU008813	ATL8C14483:915..1	gap2	ATCEA4C35482_1	97	ATL8C14483:533..311	0.56	g2997591	45	696	2.3e-67	(AF020814) glucose-6-phosphate/phosphate-translocator precursor [Pisum sativum]
146874	ATU008814	ATL8C24663:2287..1	gap2	ATCEA4C8854_1, ATCEA4S2353, ATCEA4C20543_1	97, 97, 95	ATL8C24663:2109..382	0.49	g2131724	45	280	1.6e-23	hypothetical protein YLL010c - yeast (Saccharomyces cerevisiae) [Saccharomyces cerevisiae]
146875	ATU008815	ATL8C943:1..1291	gap2	ATCEA4S2656	97			g3983663	45	1198	6.0e-124	(AB011270) importin-beta1 [Oryza sativa]
146876	ATU008816	ATL8C32377:538..2971	gap2	ATCEA4C54169_1	97			g4914329	45	430	5.4e-54	(AC005489) F14N23.15 [Arabi

												dopsis thaliana]
146877	ATU008817	ATL8C33238:4967..2671	gap2	ATCEA4C3181_1, ATCEA4C45191_1, ATCEA4C3181_2, ATCEA4S16054, ATCEA4S35222, ATCEA4S30808	97, 95, 92, 91, 90, 84			g1293835	45	419	2.5e-40	(U56965) C15H9.5 gene product [Caenorhabditis elegans]
146878	ATU008818	ATL8C28538:2089..1	gap2	ATCEA4C26165_1	97	ATL8C28538:2089..65	0.91	g3152566	44	1666	4.9e-119	(AC002986) Similar to hypothetical protein YLR002c, gb|Z7314 from S. cerevisiae. [Arabidopsis thaliana]
146879	ATU008819	ATL8C48487:1290..345	gap2	ATCEA4S1580	97	ATL8C48487:1147..345	0.90	g3738339	44	857	6.2e-90	(AC005170) putative kinase

												[Arabidopsis thaliana]
146880	ATU008820	ATL8C18762:644..2526	gap2	ATCEA4C22753_1	97	ATL8C18762:750..2123	0.82	g2897875	44	242	7.3e-13	(U90274) histone acetyltransferase HAT B [Zea mays]
146881	ATU008821	ATL8C9275:1..1074	gap2	ATCEA4C27681_1, ATCEA4C23476_1	97, 82	ATL8C9275:204..647	0.70	g4559333	44	1252		(AC007087) unknown protein [Arabidopsis thaliana]
146882	ATU008822	ATL8C17346:1..3706	gap2	ATCEA4S5791, ATCEA4S7599, ATCEA4S33892	97, 95, 92	ATL8C17346:83..3706	0.63	g4220474	44	1157	5.3e-121	(AC006069) putative myosin heavy chain [Arabidopsis thaliana]
146883	ATU008823	ATL8C47841:3632..1630	gap2	ATCEA4C85182_1	97	ATL8C47841:3560..1630	0.58	g2244956	44	919	3.2e-92	(Z97340) strong similarity to pectinesterase [Arabi

												dopsis thaliana]
146884	ATU008824	ATL8C27597:1..1291	gap2	ATCEA4C39523_2, ATCEA4S34712, ATCEA4S28734	97, 90, 85	ATL8C27597:4..1177	0.44	g4454467	44	1230		(AC006234) unknown protein [Arabidopsis thaliana]
146885	ATU008825	ATL8C17597:1..766	gap2	ATCEA4S10449	97			g3075400	44	1049	1.0e-98	(AC004484) putative thromboxane-A synthase [Arabidopsis thaliana]
146886	ATU008826	ATL8C38948:554..1	gap2	ATCEA4C20920_1, ATCEA4C20920_2	97, 97			g2245061	44	402	1.9e-30	(Z97342) Clp proteinase homolog [Arabidopsis thaliana]
146887	ATU008827	ATL8C37977:1149..21	gap2	ATCEA4C22161_1	97			g2244838	44	333	3.2e-38	(Z97337) hypothetical protein [Arabidopsis thalia

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146888	ATU008828	ATL8C49353:60..862	gap2	ATCEA4S26365, ATCEA4S33984, ATCEA4S30730	97, 95, 88			g421843	44	960	5.1e-92	protein kinase (EC 2.7.1.37) 5 - Arabidopsis thaliana [Arabidopsis thaliana]
146889	ATU008829	ATL8C25262:1624..1	gap2	ATCEA4S1851	97	ATL8C25262:1624..418	0.96	g2250699	43	922	5.0e-62	(AB001517) PWP2 protein [Homo sapiens]
146890	ATU008830	ATL8C14092:1762..2819	gap2	ATCEA4C21100_1	97	ATL8C14092:1765..2802	0.96	g2129932	43	585	2.8e-42	myb-related transcription factor TMH1 - tomato [Lycopersicon esculentum]
146891	ATU008831	ATL8C24420:1598..1	gap2	ATCEA4S24576, ATCEA4S12744	97, 86	ATL8C24420:1307..236	0.90	g465763	43	253	5.0e-23	HYPOTHETICAL 70.9 KD PROTEIN C06G4.

												2 IN CHROMOSOME III [Caenorhabditis elegans]
146892	ATU0088 32	ATL8C49132:941..1	gap2	ATCEA4C34378_1, ATCEA4S34100	97, 96	ATL8C49132:934..97	0.90	g4587577	43	359	3.4e-28	(AC006550) F1003.17 [Arabidopsis thaliana]
146893	ATU0088 33	ATL8C3332:947..3500	gap2	ATCEA4C10210_1, ATCEA4S30627, ATCEA4S15756	97, 96, 95	ATL8C3332:947..3421	0.81	g4510421	43	502	1.0e-32	(AC006929) unknown protein [Arabidopsis thaliana]
146894	ATU0088 34	ATL8S3866:477..1	gap2	ATCEA4C1974_1	97	ATL8S3866:336..62	0.76	g3152604	43	691	4.8e-55	(AC004482) prenderanylgeranyl pyrophosphate synthase [Arabidopsis thaliana]
146895	ATU0088 35	ATL8C41398:1..2005	gap2	ATCEA4S26105, ATCEA4	97, 95	ATL8C41398:198..1610	0.75	g2132493	43	299	2.3e-25	probable membrane

				S30390								protein YDR294c - yeast (Saccharomyces cerevisiae) [Saccharomyces cerevisiae]
146896	ATU008836	ATL8C35660:1..510	gap2	ATCEA4S35552	97	ATL8C35660:55..313	0.71	g4836881	43	671	2.1e-59	(AC007260) lcl|prt_seq No definition line found [Arabidopsis thaliana]
146897	ATU008837	ATL8C6511:1..1032	gap2	ATCEA4C3832_1	97	ATL8C6511:596..940	0.59	g4158230	43	502	4.1e-49	(Y18625) amylogenin [Triticum aestivum]
146898	ATU008838	ATL8S11954:1..609	gap2	ATCEA4C727_1	97	ATL8S11954:50..514	0.42	g3286691	43	893	1.1e-55	(AJ007450) auxilin-like protein [Arabidopsis thalia

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146899	ATU008839	ATL8S19642:556..8	gap2	ATCEA4S2603	97			g3540186	43	45	0.28	(AC004122) Hypothetical protein [Arabidopsis thaliana]
146900	ATU008840	ATL8C7496:1005..1	gap2	ATCEA4C101266_1	97			g728827	43	237	5.2e-20	ALLANTOINASE PRECURSOR [Rana catesbeiana]
146901	ATU008841	ATL8C3849:671..1	gap2	ATCEA4C23294_1	97			g4455313	43	515	1.6e-41	(AL035528) fatty acid elongase-like protein (cer2-like) [Arabidopsis thaliana]
146902	ATU008842	ATL8C46614:1..1136	gap2	ATCEA4C1880_1	97	ATL8C46614:92..939	0.97	g4325324	42	1023	2.2e-112	(AF125574) lysyl-tRNA synthetase; LysRS [Arabidopsis thaliana]

146903	ATU008843	ATL8C40726:2686..1	gap2	ATCEA4C98389_1	97	ATL8C40726:2463..229	0.94	g4704204	42	231	1.2e-15	(AL021391) dJ102D24.1 (novel Mitosis-specific Chromosome Segregation protein SMC1 LIKE protein) [Homo sapiens]
146904	ATU008844	ATL8C23078:1353..1	gap2	ATCEA4C102247_1, ATCEA4S31978	97, 88	ATL8C23078:1186..200	0.91	g4415908	42	511	8.3e-26	(AC006282) unknown protein [Arabidopsis thaliana]
146905	ATU008845	ATL8C35736:181..1238	gap2	ATCEA4C1776_1, ATCEA4S7870	97, 88	ATL8C35736:320..1073	0.90	g2583135	42	349	1.2e-31	(AC002387) hypothetical protein [Arabidopsis thaliana]
146906	ATU008846	ATL8C32641:1182..1	gap2	ATCEA4C13427_1, ATCEA4	97, 94	ATL8C32641:1128..209	0.89	g2352923	42	650	2.3e-66	(AF012863) cytosolic

				S5525								glucose-6-phosphate dehydrogenase 2 [Petroselinum crispum]
146907	ATU008847	ATL8C32602:1349..1	gap2	ATCEA4S22152, ATCEA4C23609_1	97, 96	ATL8C32602:1316..147	0.84	g4836950	42	1053	1.2e-114	(AC006085) Hypothetical protein [Arabidopsis thaliana]
146908	ATU008848	ATL8C21021:681..1	gap2	ATCEA4S11805	97	ATL8C21021:681..152	0.82	g3335373	42	103	8.1e-06	(AC003028) putative GTL1 protein [Arabidopsis thaliana]
146909	ATU008849	ATL8C43153:755..1	gap2	ATCEA4C235_2	97	ATL8C43153:603..255	0.73	g4557229	42	246	5.9e-23	angio-associated, migratory cell protein [Homo sapiens]
146910	ATU008	ATL8C6	gap2	ATCEA4	97,	ATL8C6	0.66	g40966	42	974	3.0e-	(U3723

	850	222:1..981		S1111, ATCEA4S457, ATCEA4S34023, ATCEA4S33021	91, 90, 89	222:245..505		93			82	5) cinnamate 4-hydroxylase [Arabidopsis thaliana]
146911	ATU008851	ATL8C31513:871..40	gap2	ATCEA4S14853, ATCEA4C80952_1	97, 93	ATL8C31513:839..359	0.51	g3184260	42	113	1.1e-07	(U52945) tumor susceptibility protein TSG101 [Mus musculus]
146912	ATU008852	ATL8C12025:1105..1	gap2	ATCEA4C5667_2, ATCEA4S4653, ATCEA4S8602	97, 92, 83	ATL8C12025:693..473	0.50	g3047104	42	772	1.4e-70	(AF058919) No definition line found [Arabidopsis thaliana]
146913	ATU008853	ATL8C37640:1..1194	gap2	ATCEA4S7467, ATCEA4S2829	97, 85	ATL8C37640:121..1177	0.49	g3033544	42	134	2.3e-08	(AF055873) hypothetical protein [Synechococcus PCC7942]
146914	ATU008854	ATL8C37258:1	gap2	ATCEA4S2374	97	ATL8C37258:8	0.48	g2809251	42	352		(AC002560)

		105..358				78..358						F21B7.20 [Arabidopsis thaliana]
146915	ATU008855	ATL8C23859:720..1	gap2	ATCEA4C35428_1	97			g166341	42	350	5.0e-31	(M98267) alliinase [Allium cepa]
146916	ATU008856	ATL8C14834:402..1	gap2	ATCEA4S13378	97			g2129634	42	207	4.0e-11	lectin-like protein - Arabidopsis thaliana [Arabidopsis thaliana]
146917	ATU008857	ATL8C1355:1..1375	gap2	ATCEA4S14130	97			g4914381	42	562	2.0e-58	(AC007584) unknown protein [Arabidopsis thaliana]
146918	ATU008858	ATL8C48977:648..1	gap2	ATCEA4C3463_1	97			g4038055	42	467	1.1e-31	(AC005897) putative cytochrome P450 [Arabidopsis thalia

												na]
146919	ATU0088 59	ATL8C28 359:13 71..1	gap2	ATCEA4S4863	97	ATL8C28 359:13 21..19 1	0.98	g1881662	41	487	4.6e-48	(U89264) kinesin like protein 67a [Drosophila melanogaster]
146920	ATU0088 60	ATL8C81 62:1..528	gap2	ATCEA4S4994	97	ATL8C81 62:112..497	0.97	g2447107	41	266	2.6e-27	(U42580) A638R [Paramecium bursaria Chlorella virus 1]
146921	ATU0088 61	ATL8C79 22:118..1262	gap2	ATCEA4S10682	97	ATL8C79 22:611..1235	0.93	g3063697	41	1394	2.1e-138	(AL022537) putative myb-protein (partial) [Arabidopsis thaliana]
146922	ATU0088 62	ATL8C17 501:1..597	gap2	ATCEA4C618_1, ATCEA4S35225	97, 85	ATL8C17 501:54..567	0.87	g3979665	41	619	1.2e-50	(X66482) orf [Arabidopsis thaliana]
146923	ATU0088 63	ATL8C34 967:1	gap2	ATCEA4C28442	97	ATL8C34 967:2	0.77	g3152596	41	601	8.1e-65	(AC002986)

		..1447		_1		72..1351						YUP8H12R.36 [Arabidopsis thaliana]
146924	ATU008864	ATL8C31523:172..1885	gap2	ATCEA4S1731	97			g2244807	41	188	3.9e-13	(Z97336) hypothetical protein [Arabidopsis thaliana]
146925	ATU008865	ATL8C8115:236..602	gap2	ATCEA4C43298_1	97			g4006826	41	336	5.9e-22	(AC005970) unknown protein [Arabidopsis thaliana]
146926	ATU008866	ATL8C49118:1720..408	gap2	ATCEA4C7381_1, ATCEA4C81184_1	97, 96			g4103635	41	227	2.9e-19	(AF026538) ABA-responsive protein [Hordeum vulgare]
146927	ATU008867	ATL8C34346:1139..3122	gap2	ATCEA4S466	97	ATL8C34346:1139..3068	0.95	g2190558	40	1180	2.0e-100	(AC001229) F5I14.14 [Arabidopsis thaliana]

146928	ATU008868	ATL8C43150:1703..956	gap2	ATCEA4C123020_1, ATCEA4C58034_1	97, 85	ATL8C43150:1629..1093	0.92	g2190547	40	266	4.3e-23	(AC001229) ESTs gb|T43256,gb|46316,gb|N64930,gb|AA395255,gb|AA404382 come from this gene. [Arabidopsis thaliana]
146929	ATU008869	ATL8C25214:1..2441	gap2	ATCEA4C35340_1	97	ATL8C25214:142..1848, ATL8C25214:2055..1986	0.90, 0.92	g2326363	40	1697	1.1e-168	(AJ001037) DNA-directed RNA polymerase [Arabidopsis thaliana]
146930	ATU008870	ATL8C48141:1234..1	gap2	ATCEA4C6780_1	97	ATL8C48141:1234..855	0.84	g1699370	40	131	1.2e-05	(S82620) prolidase=peptidase D/imidopeptidase {EC 3.4.13.9} [Mus sp.]

146931	ATU008871	ATL8C705:1..1732	gap2	ATCEA4S3029	97	ATL8C705:76..1391	0.79	g2980783	40	194	2.3e-11	(AL022198) putative protein [Arabidopsis thaliana]
146932	ATU008872	ATL8C44086:533..1	gap2	ATCEA4C1431_1, ATCEA4S14763	97, 86	ATL8C44086:481..69	0.78	g1800147	40	239	1.6e-26	(U83655) membrane associated protein [Arabidopsis thaliana]
146933	ATU008873	ATL8C13887:608..1	gap2	ATCEA4C1513_1	97	ATL8C13887:515..19	0.75	g2852447	40	799	8.0e-74	(D88206) protein kinase [Arabidopsis thaliana]
146934	ATU008874	ATL8C24086:1298..1	gap2	ATCEA4C495_1	97	ATL8C24086:958..89	0.69	g2664210	40	766	8.5e-74	(AJ222644) asparaginyl-tRNA synthetase [Arabidopsis thaliana]
146935	ATU008875	ATL8C30238:331..10	gap2	ATCEA4S7859	97	ATL8C30238:352..95	0.68	g3386611	40	523	1.2e-52	(AC004665) unknow

		20				1						n protein [Arabidopsis thaliana]
146936	ATU0088 76	ATL8C45353:1028..1979	gap2	ATCEA4C26861_1, ATCEA4S3459	97, 89	ATL8C45353:1308..1875	0.58	g3461821	40	932	1.0e-95	(AC004138) putative nucleoside triphosphatase [Arabidopsis thaliana]
146937	ATU0088 77	ATL8C38179:1119..144	gap2	ATCEA4C7871_2, ATCEA4C7871_1	97, 95	ATL8C38179:1012..144	0.57	g3241945	40	628	1.1e-65	(AC004625) unknown protein [Arabidopsis thaliana]
146938	ATU0088 78	ATL8C36593:49..825	gap2	ATCEA4C3313_2, ATCEA4C3313_6, ATCEA4S32311	97, 88, 86	ATL8C36593:489..725	0.55	g3063444	40	375	8.2e-21	(AC003981) F22O13.5 [Arabidopsis thaliana]
146939	ATU0088 79	ATL8C22026:1108..1	gap2	ATCEA4S7748	97	ATL8C22026:1020..79	0.48	g2459435	40	527	3.9e-56	(AC002332) putative serine carboxypepti

												dase [Arabidopsis thaliana]
146940	ATU008880	ATL8C48588:1452..584	gap2	ATCEA4C345_1	97			g1174852	40	223	1.4e-20	UBIQUITIN-CONJUGATING ENZYME E2-19 KD (UBIQUITIN-PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) (TAYO29) [Arabidopsis thaliana]
146941	ATU008881	ATL8C3833:639..1	gap2	ATCEA4C11001_1, ATCEA4S35871	97, 82			g2580440	40	260	3.2e-26	(D87261) PCF2 [Oryza sativa]
146942	ATU008882	ATL8C16720:1..3256	gap2	ATCEA4S1957, ATCEA4S5223, ATCEA4C763_1	97, 89, 82			g4586107	40	3129	5.7e-309	(AL049638) putative disease resistance protei

												n [Arabidopsis thaliana]
146943	ATU008883	ATL8C23209:1..571	gap2	ATCEA4C1733_1, ATCEA4S24990, ATCEA4S24989	97, 91, 90			g4106340	40	867	1.3e-86	(AF062396) protein phosphatase 2A regulatory subunit isoform B' delta [Arabidopsis thaliana]
146944	ATU008884	ATL8C13478:2185..465	gap2	ATCEA4C117363_1, ATCEA4S27462, ATCEA4S31181, ATCEA4S28658	97, 90, 90, 83	ATL8C13478:1717..655	0.89	g3915866	39	1031	4.5e-87	GLUTAMINYL-TRNA SYNTHETASE (GLUTAMINE--TRNA LIGASE) (GLNRS) [Lupinus luteus]
146945	ATU008885	ATL8C49888:1484..216	gap2	ATCEA4C20347_1	97	ATL8C49888:1344..282	0.86	g4309734	39	1137	9.4e-75	(AC006439) putative 26S proteosome

												regulatory subunit 8 [Arabidopsis thaliana]
146946	ATU008886	ATL8C6093:906..1	gap2	ATCEA4C849_1	97	ATL8C6093:660..180	0.80	g120985	39	606	1.1e-38	GUANINE NUCLEOTIDE-BINDING PROTEIN ALPHA-1 SUBUNIT (GP-ALPHA-1) [Arabidopsis thaliana]
146947	ATU008887	ATL8C31563:859..1	gap2	ATCEA4S3977	97	ATL8C31563:764..110	0.78	g3860272	39	595	1.8e-54	(AC005824) putative suppressor protein [Arabidopsis thaliana]
146948	ATU008888	ATL8C8458:813..3455	gap2	ATCEA4S5843	97	ATL8C8458:973..2964	0.61	g2809239	39	79	7.0e-06	(AC002560) F21B7.8 [Arabidopsis thalia

												na]
146949	ATU008889	ATL8C1268:1..353	gap2	ATCEA4C1033_1	97	ATL8C1268:46..353	0.56	g2832406	39	447	1.8e-20	(Y14208) R2R3-MYB transcription factor [Arabidopsis thaliana]
146950	ATU008890	ATL8C37217:1718..1	gap2	ATCEA4C17973_1	97	ATL8C37217:1385..34	0.53	g4584524	39	369		(AL049607) putative protein [Arabidopsis thaliana]
146951	ATU008891	ATL8C18240:934..1	gap2	ATCEA4C33837_1	97	ATL8C18240:878..9	0.46	g4322670	39	125	0.016	(AF094508) dentin phosphoryn [Homo sapiens]
146952	ATU008892	ATL8S1888:497..1	gap2	ATCEA4C3313_6, ATCEA4C3313_4, ATCEA4C3313_2	97, 91, 88			g3063444	39	493	8.2e-48	(AC003981) F22O13.5 [Arabidopsis thaliana]
146953	ATU008893	ATL8C20392:1096..1	gap2	ATCEA4C6350_1, ATCEA4	97, 93			g3757521	39	443	3.0e-42	(AC005167) unknown

				S3429								protein [Arabidopsis thaliana]
146954	ATU008894	ATL8C17481:101..941	gap2	ATCEA4C38988_1	97			g2262112	39	918	2.1e-88	(AC002343) trehalase precursor isolog [Arabidopsis thaliana]
146955	ATU008895	ATL8C38744:1225..1	gap2	ATCEA4C131198_1	97	ATL8C38744:1157..49	0.99	g4753655	38	548	2.2e-57	(AL049751) pectate lyase like protein [Arabidopsis thaliana]
146956	ATU008896	ATL8C3479:882..1946	gap2	ATCEA4S6018	97	ATL8C3479:894..1923	0.99	g2258469	38	402	5.3e-24	(AF009179) replication protein A1 [Oryza sativa]
146957	ATU008897	ATL8C30195:1..498	gap2	ATCEA4S662	97	ATL8C30195:126..493	0.98	g2244874	38	173	0.43	(Z97338) coll wall protein homolo

												g [Arabidopsis thaliana]
146958	ATU008898	ATL8C16562:2068..1348	gap2	ATCEA4S15055	97	ATL8C16562:2024..1515	0.95	g3851530	38	527	3.2e-44	(AF065435) nodulin [Glycine max]
146959	ATU008899	ATL8C35988:1581..809	gap2	ATCEA4C119695_1	97	ATL8C35988:1523..939	0.95	g4586246	38	1080	3.1e-110	(AL049640) putative protein [Arabidopsis thaliana]
146960	ATU008900	ATL8C21506:1..1419	gap2	ATCEA4S7789	97	ATL8C21506:129..1393	0.83	g228210	38	837	9.4e-59	granule-bound starch synthase [Solanum tuberosum]
146961	ATU008901	ATL8C10957:7021..6428	gap2	ATCEA4C34770_1	97	ATL8C10957:6807..6641	0.82	g2739044	38	238	6.2e-22	(AF024651) polyphosphoinositide binding protein Ssh1p [Glycine

												max]
146962	ATU008902	ATL8C11037:1..1220	gap2	ATCEA4C17503_1	97	ATL8C11037:87..565	0.81	g4678747	38	176	7.2e-16	(AL049669) hypothetical protein [Homo sapiens]
146963	ATU008903	ATL8C22879:1239..1	gap2	ATCEA4S1690	97	ATL8C22879:1005..109	0.80	g3033397	38	678	1.5e-46	(AC004238) unknown protein [Arabidopsis thaliana]
146964	ATU008904	ATL8C46056:977..3014	gap2	ATCEA4S35019	97	ATL8C46056:977..2836	0.78	g4809171	38	588	2.3e-48	(AF135455) phytochrome A supressor spa1 [Arabidopsis thaliana]
146965	ATU008905	ATL8C35821:1923..379	gap2	ATCEA4C21745_1	97	ATL8C35821:1923..579	0.76	g3298512	38	236	3.2e-21	(AB015670) A2-5a orf6; hypothetical protein homologous to stage V

												sporulation protein K [Bacillus sp.]
146966	ATU008906	ATL8C37244:1072..425	gap2	ATCEA4C16207_1, ATCEA4S18862	97, 85	ATL8C37244:950..573	0.76	g729477	38	433		FERREDOXIN--NADP REDUCTASE PRECURSOR (FNR) [Mesembryanthemum crystallinum]
146967	ATU008907	ATL8C17264:1130..1	gap2	ATCEA4C87431_1	97	ATL8C17264:1043..29	0.69	g4455192	38	407	5.6e-43	(AL035440) putative protein [Arabidopsis thaliana]
146968	ATU008908	ATL8C18294:148..3485	gap2	ATCEA4S35031, ATCEA4C82396_1, ATCEA4S31263, ATCEA4S1349	97, 95, 93, 91	ATL8C18294:148..3411	0.68	g4455271	38	953	6.1e-61	(AL035527) serine protease-like protein [Arabidopsis thaliana]
146969	ATU008909	ATL8C45456:1	gap2	ATCEA4S32806	97, 86	ATL8C45456:1	0.66	g4006860	38	438	1.4e-43	(Z99707)

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		23..799		ATCEA4S27327		23..243						thiol-disulfide interchange like protein [Arabidopsis thaliana]
146970	ATU008910	ATL8C22220:617..1	gap2	ATCEA4C965_1	97	ATL8C22220:565..103	0.65	g498707	38	559	4.0e-48	(X78422) HYP1 [Arabidopsis thaliana]
146971	ATU008911	ATL8C34039:1..1005	gap2	ATCEA4C115997_1	97	ATL8C34039:921..838	0.48	g1621463	38	417	5.7e-42	(U73104) laccase [Liriodendron tulipifera]
146972	ATU008912	ATL8C7431:1070..1	gap2	ATCEA4C25344_1	97			g4454035	38	498	2.6e-24	(AL035394) polyprenyltransferase like protein [Arabidopsis thaliana]
146973	ATU008913	ATL8C11158:350..1	gap2	ATCEA4C26025_1	97			g4586265	38	159	6.6e-10	(AL049640) putative

												protein [Arabidopsis thaliana]
146974	ATU008914	ATL8C5804:1..440	gap2	ATCEA4C8493_1	97			g2982466	38	311		(AL022223) putative protein [Arabidopsis thaliana]
146975	ATU008915	ATL8C19250:580..1	gap2	ATCEA4C22340_1	97			g4585974	38	658	1.1e-67	(AC005287) Hypothetical protein [Arabidopsis thaliana]
146976	ATU008916	ATL8C23035:244..871	gap2	ATCEA4C74415_1, ATCEA4C23892_1	97, 92	ATL8C23035:291..841	0.99	g4903018	37	317	2.3e-24	(AB027507) ACE [Arabidopsis thaliana]
146977	ATU008917	ATL8C13235:986..1	gap2	ATCEA4S4639	97	ATL8C13235:790..37	0.99	g4432839	37	175	3.5e-15	(AC006283) unknown protein [Arabidopsis thaliana]
146978	ATU008	ATL8C3	gap2	ATCEA4	97	ATL8C3	0.94	g43253	37	732	3.2e-	(AF125

	918	5125:84..1545		S13582		5125:84..1302		24			51	574) lysyl-tRNA synthetase; LysRS [Arabidopsis thaliana]
146979	ATU008919	ATL8S3369:639..1	gap2	ATCEA4S6264	97	ATL8S3369:357..197	0.92	g4538911	37	429	5.5e-43	(AL049482) hypothetical protein [Arabidopsis thaliana]
146980	ATU008920	ATL8C23712:1207..1	gap2	ATCEA4S11249	97	ATL8C23712:1090..21	0.86	g3928083	37	495	4.6e-36	(AC005770) unknown protein [Arabidopsis thaliana]
146981	ATU008921	ATL8S8818:657..1	gap2	ATCEA4C1956_1	97	ATL8S8818:604..244	0.84	g2576363	37	702	9.2e-61	(U39783) amino acid transport protein [Arabidopsis thaliana]
146982	ATU008922	ATL8C37071:1..660	gap2	ATCEA4C2020_1	97	ATL8C37071:18..649	0.84	g2052383	37	667		(U66345) calret

												iculin [Arabidopsis thaliana]
146983	ATU008923	ATL8C33335:1..1021	gap2	ATCEA4C103039_1, ATCEA4S32457	97, 97	ATL8C33335:959..491	0.84	g4914456	37	219	7.2e-16	(AL050400) putative protein [Arabidopsis thaliana]
146984	ATU008924	ATL8C26450:1396..432	gap2	ATCEA4S30340	97	ATL8C26450:1353..494	0.77	g2244834	37	544	3.7e-39	(Z97337) hypothetical protein [Arabidopsis thaliana]
146985	ATU008925	ATL8C14504:883..1	gap2	ATCEA4S11226	97	ATL8C14504:879..325	0.76	g2597824	37	585	7.3e-58	(AJ002532) endo-polygalacturonase [Arabidopsis thaliana]
146986	ATU008926	ATL8C35395:1322..1	gap2	ATCEA4S29764, ATCEA4S3253	97, 88	ATL8C35395:1115..406	0.72	g2275202	37	932	7.8e-65	(AC002337) acyl-CoA synthetase isolog [Arabidopsis thalia

												na]
146987	ATU008927	ATL8C32944:1..645	gap2	ATCEA4S23828	97	ATL8C32944:289..645	0.65	g3395440	37	321	1.1e-27	(AC004683) hypothetical protein [Arabidopsis thaliana]
146988	ATU008928	ATL8C2473:1..3051	gap2	ATCEA4S5411	97	ATL8C2473:106..2487	0.46	g3367592	37	1470	2.4e-157	(AL031135) putative protein [Arabidopsis thaliana]
146989	ATU008929	ATL8C24775:1..858	gap2	ATCEA4C32578_1, ATCEA4C113172_1	97, 89			g2493486	37	82	0.0042	HYPOTHETICAL SUGAR KINASE MJ0406 [Methanococcus jannaschii]
146990	ATU008930	ATL8C50259:675..1432	gap2	ATCEA4S2711	97			g3236253	37	492	1.6e-53	(AC004684) receptor-like protein kinase [Arabidopsis thaliana]
146991	ATU008	ATL8C2	gap2	ATCEA4	97, 97			g32016	37	216	5.2e-	(AC004

	931	5228:1880..1080		C77563_1, ATCEA4S26758				17			20	669) hypothetical protein [Arabidopsis thaliana]
146992	ATU008932	ATL8S2385:225..531	gap2	ATCEA4S4018	97			g3319370	37	294	3.0e-28	(AF077409) contains similarity to C3HC4-type zinc fingers (Pfam: zf-C3HC4.hmm, score: 32.94) [Arabidopsis thaliana]
146993	ATU008933	ATL8C25122:601..1	gap2	ATCEA4C1634_3, ATCEA4C1634_2, ATCEA4S4065, ATCEA4C1987_1, ATCEA4C186_2,	97, 97, 84, 84, 84, 82	ATL8C25122:249..162	0.99	g4097565	36	286	3.9e-30	(U64920) ATGP3 [Arabidopsis thaliana]

				ATCEA4C24_1								
146994	ATU008934	ATL8C11306:962..1941	gap2	ATCEA4S11771	97	ATL8C11306:962..1733	0.80	g3894187	36	800	5.5e-68	(AC005662) hypothetical protein [Arabidopsis thaliana]
146995	ATU008935	ATL8C17745:187..444	gap2	ATCEA4S8031	97	ATL8C17745:243..437	0.79	g2459433	36	314	6.2e-21	(AC002332) hypothetical protein [Arabidopsis thaliana]
146996	ATU008936	ATL8C4961:883..1	gap2	ATCEA4S27063	97	ATL8C4961:825..580	0.79	g3860246	36	186	2.3e-06	(AC005824) putative reverse-transcriptase protein [Arabidopsis thaliana]
146997	ATU008937	ATL8C25796:325..1576	gap2	ATCEA4C1505_1	97	ATL8C25796:767..1576	0.78	g4704613	36	677	2.6e-54	(AF109695) monodehydroascorbate reductase

												[Brassica juncea]
146998	ATU008938	ATL8C18029:1..1438	gap2	ATCEA4S9719, ATCEA4C23820_1, ATCEA4S13745, ATCEA4S9674	97, 91, 88, 85	ATL8C18029:178..1384	0.73	g1651828	36	372	8.8e-31	(D90900) dihydrolipoamide dehydrogenase [Synechocystis sp.]
146999	ATU008939	ATL8C9120:2291..376	gap2	ATCEA4S12828, ATCEA4S321	97, 93	ATL8C9120:2064..1051	0.70	g4432802	36	1374		(AC006437) putative polpolyprotein, 5' partial [Arabidopsis thaliana]
147000	ATU008940	ATL8C25773:1163..3012	gap2	ATCEA4S2708, ATCEA4C26257_1	97, 97	ATL8C25773:1395..3008	0.69	g3600036	36	943	3.6e-77	(AF080119) contains similarity to protein kinase domains (Pfam: pkinase.hmm, score:

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												227.04) [Arabidopsis thaliana]
147001	ATU008941	ATL8C15549:651..184	gap2	ATCEA4S33791, ATCEA4C46438_1, ATCEA4S26777	97, 95, 90	ATL8C15549:436..311	0.63	g1524370	36	112	3.7e-10	(X92491) TOM20 [Solanum tuberosum]
147002	ATU008942	ATL8S8396:1..581	gap2	ATCEA4S10681	97	ATL8S8396:66..340	0.46	g4584521	36	228	5.3e-20	(AL049607) putative protein [Arabidopsis thaliana]
147003	ATU008943	ATL8C7505:1..1131	gap2	ATCEA4S10466, ATCEA4C127190_1, ATCEA4C61662_1, ATCEA4S34056	97, 96, 96, 86	ATL8C7505:161..282	0.45	g3805850	36	130	8.0e-09	(AL031986) putative protein [Arabidopsis thaliana]
147004	ATU008944	ATL8C45892:732..1427	gap2	ATCEA4C3869_1	97			g2980764	36	200	1.5e-14	(AL022198) putative protein [Arabidopsis thaliana]

147005	ATU008945	ATL8S26833:494..1	gap2	ATCEA4C197_1, ATCEA4C195_1	97, 84			g2738760	36	776		(AF016284) 5'-adenylylsulfate reductase [Arabidopsis thaliana]
147006	ATU008946	ATL8C27465:1877..1	gap2	ATCEA4C26022_1, ATCEA4S14607	97, 83			g8858081, g1001959	36, 35	86, 314	1.2e-35	(U18340) D6R [Variola virus]; (U19107) ZNF127 [Homo sapiens]
147007	ATU008947	ATL8C38082:1..1410	gap2	ATCEA4C6467_1	97			g4539342	36	1174	1.2e-118	(AL035539) putative protein [Arabidopsis thaliana]
147008	ATU008948	ATL8C39189:1179..2163	gap2	ATCEA4C9227_1, ATCEA4S12950	97, 82			g2924509	36	729	1.1e-70	(AL022023) subtilisin proteinase-like [Arabidopsis thaliana]

147009	ATU008949	ATL8C41565:458..1	gap2	ATCEA4C102364_1	97			g2829925	36	555	5.8e-51	(AC002291) Similar to dnaj-like protein, gp|Y11969|2230757 [Arabidopsis thaliana]
147010	ATU008950	ATL8S13752:518..201	gap2	ATCEA4C34517_1	97			g1871185	36	159	1.9e-16	(U90439) seven in absentia isolog [Arabidopsis thaliana]
147011	ATU008951	ATL8S18092:1..232	gap2	ATCEA4C26694_1	97			g3047076	36	140	2.6e-13	(AF058914) contains similarity to SRF-type transcription factors DNA-binding and dimerization domain

												s (PFam: transcript_fact.hmm, score 37.47) [Arabidopsis thaliana]
147012	ATU008952	ATL8C31770:1..850	gap2	ATCEA4C76_1	97	ATL8C31770:6..826	0.99	g1172441	35	537	3.7e-40	POSSIBLE TRANSCRIPTION FACTOR POSF21 [Arabidopsis thaliana]
147013	ATU008953	ATL8C22205:886..1	gap2	ATCEA4C87903_2	97	ATL8C22205:705..100	0.98	g4455322	35	678	8.6e-58	(AL035525) putative protein kinase [Arabidopsis thaliana]
147014	ATU008954	ATL8C30375:796..1	gap2	ATCEA4S7568	97	ATL8C30375:624..108	0.97	g3702352	35	488	1.0e-49	(AC005397) putative mitochondrial carrier protein

												[Arabidopsis thaliana]
147015	ATU008955	ATL8C42900:811..1	gap2	ATCEA4C8924_1	97	ATL8C42900:808..291	0.96	g2342689	35	346	4.7e-14	(AC000106) Similar to Beta integral membrane protein (gb|U43629). [Arabidopsis thaliana]
147016	ATU008956	ATL8C9548:2534..4382	gap2	ATCEA4C24167_1, ATCEA4S2513	97, 88	ATL8C9548:2575..4325	0.89	g2144323	35	848	2.2e-61	xanthine dehydrogenase (EC 1.1.1.204) / xanthine oxidase (EC 1.1.3.22) - rat []
147017	ATU008957	ATL8C49296:1..1342	gap2	ATCEA4C118660_1	97	ATL8C49296:304..952	0.88	g2062171	35	887	1.5e-76	(AC001645) DNA binding protein (CDC27SH) isolog

												[Arabidopsis thaliana]
147018	ATU008958	ATL8C25211:2644..4351	gap2	ATCEA4C6207_1, ATCEA4S684	97, 95	ATL8C25211:2781..4269	0.87	g968973	35	107	0.049	(U29156) involved in signaling by the epidermal growth factor receptor; Method: conceptual translation supplied by author. [Mus musculus]
147019	ATU008959	ATL8C29908:591..1	gap2	ATCEA4C714_1, ATCEA4S20988	97, 84	ATL8C29908:437..219	0.84	g3319884	35	625	1.7e-46	(AJ224306) PRT1 [Arabidopsis thaliana]
147020	ATU008960	ATL8C11078:630..1	gap2	ATCEA4C22304_1	97	ATL8C11078:263..42	0.76	g728867	35	244	1.4e-23	ANTER-SPECIFIC PROLINE-RICH PROTEIN APG PRECUR

												SOR [Arabidopsis thaliana]
147021	ATU008961	ATL8C38180:1260..1	gap2	ATCEA4C16827_1	97	ATL8C38180:841..230	0.76	g3510253	35	137	2.9e-06	(AC005310) hypothetical protein [Arabidopsis thaliana]
147022	ATU008962	ATL8C348:85..4224	gap2	ATCEA4C5405_1, ATCEA4S32260, ATCEA4C92380_1	97, 95, 95	ATL8C348:282..2743, ATL8C348:4059..3699	0.73, 0.66	g2388911	35	294	1.1e-11	(Z98974) hypothetical protein [Schizosaccharomyces pombe]
147023	ATU008963	ATL8C28697:1368..452	gap2	ATCEA4C34379_3, ATCEA4S35957	97, 82	ATL8C28697:1023..596	0.67	g4567283	35	803	1.2e-77	(AC006841) unknown protein [Arabidopsis thaliana]
147024	ATU008964	ATL8C10994:3252..2253	gap2	ATCEA4C1989_1	97	ATL8C10994:3195..2670	0.65	g1399181	35	759	1.3e-63	(U50738) lycopene epsilon cyclase [Arabi

												dopsis thaliana]
147025	ATU008965	ATL8C3739:2233..215	gap2	ATCEA4C118694_1, ATCEA4C1932_1	97, 87	ATL8C3739:2229..215	0.64	g2129575	35	1128	6.1e-102	DNA repair protein homolog XPBara-Arabidopsis thaliana []
147026	ATU008966	ATL8C28282:856..1	gap2	ATCEA4S8399, ATCEA4C2147_10	97, 91	ATL8C28282:329..26	0.47	g2842490	35	396	2.5e-39	(AL021749) heat-shock protein [Arabidopsis thaliana]
147027	ATU008967	ATL8C22923:307..732	gap2	ATCEA4C5902_4, ATCEA4S35514	97, 95	ATL8C22923:326..573	0.46	g2496731	35	248	2.4e-18	HYPOTHETICAL 30.2 KD PROTEIN Y4OV [Rhizobium sp. NGR234]
147028	ATU008968	ATL8C15280:1439..1	gap2	ATCEA4C27829_1	97	ATL8C15280:696..205	0.42	g4468804	35	215	1.5e-16	(AL035601) putative protein [Arabidopsis thalia

												na]
147029	ATU008969	ATL8C41376:669..1	gap2	ATCEA4C64353_1	97			g2920839	35	77	4.5e-05	(U95136) Os-FIERG2 gene product [Oryza sativa]
147030	ATU008970	ATL8S13799:1..434	gap2	ATCEA4S32419	97			g2529663	35	267	2.7e-28	(AC002535) putative lysophospholipase [Arabidopsis thaliana]
147031	ATU008971	ATL8C21410:295..809	gap2	ATCEA4C15143_1	97			g4539305	35	606	5.1e-53	(AL049480) putative protein [Arabidopsis thaliana]
147032	ATU008972	ATL8S9203:1..528	gap2	ATCEA4S25153, ATCEA4S33510, ATCEA4S34727	97, 93, 91			g3650034	35	442	6.6e-44	(AC005396) putative flavonol sulfotransferase [Arabidopsis thaliana]

147033	ATU008973	ATL8C33590:1..653	gap2	ATCEA4S30345	97			g4734006	35	338	4.5e-20	(AC007178) hypothetical protein [Arabidopsis thaliana]
147034	ATU008974	ATL8C23692:1540..1	gap2	ATCEA4C238_1	97			g3461884	35	415	1.3e-39	(AB006082) phosphoribosyl-ATP pyrophosphohydrolase [Arabidopsis thaliana]
147035	ATU008975	ATL8C10406:2766..587	gap2	ATCEA4C118967_1, ATCEA4S31206, ATCEA4S33858	97, 89, 88	ATL8C10406:2766..1565	0.91	g2809247	34	127		(AC002560) F21B7.16 [Arabidopsis thaliana]
147036	ATU008976	ATL8C36974:1080..3492	gap2	ATCEA4S14035	97	ATL8C36974:1080..2900	0.81	g3461835	34	200	2.3e-18	(AC005315) putative protein kinase [Arabidopsis thaliana]
147037	ATU008977	ATL8C46027:512..1	gap2	ATCEA4C53559_1	97	ATL8C46027:491..75	0.80	g2088651	34	179	8.4e-15	(AF002109) hypers

												ensitivity-related gene 201 isolog [Arabidopsis thaliana]
147038	ATU008978	ATL8S27167:266..1	gap2	ATCEA4C37421_1	97	ATL8S27167:223..109	0.67	g1703606	34	65	0.00015	(U80441) coded for by C. elegans cDNA CEESL52F; coded for by C. elegans cDNA yk55c10.3; coded for by C. elegans cDNA yk117f3.3; coded for by C. elegans cDNA CEESB33F; coded for by C. elegans cDNA

												yk89b10.3; coded for by C. elegans cDNA yk55c. .. []
147039	ATU008979	ATL8C34972:1..995	gap2	ATCEA4S27340, ATCEA4S19423, ATCEA4S27658	97, 95, 94	ATL8C34972:200..979	0.65	g4335751	34	967	9.2e-77	(AC006284) putative methyltransferase [Arabidopsis thaliana]
147040	ATU008980	ATL8C11444:1844..1	gap2	ATCEA4S1414	97	ATL8C11444:1645..45	0.46	g2980641	34	776	2.0e-83	(Y11250) multiresistance protein [Arabidopsis thaliana]
147041	ATU008981	ATL8C19417:1..1210	gap2	ATCEA4C863_1	97			g1888359, g2244817	34, 31	506, 289	8.7e-57, 3.3e-31	(Y11689) 3-ketoacyl-acyl carrier protein synthase III [Arabidopsis thalia

												na]; (Z97336) disease resistance protein RPS2 homolog [Arabidopsis thaliana]
147042	ATU008982	ATL8C15167:1..1272	gap2	ATCEA4S22536, ATCEA4C63410_2, ATCEA4C32076_1	97, 96, 91			g3702327	34	146	2.2e-09	(AC005397) unknown protein [Arabidopsis thaliana]
147043	ATU008983	ATL8C40798:741..281	gap2	ATCEA4S141, ATCEA4C3067_1	97, 83			g4454045	34	219	2.2e-20	(AL035394) putative protein [Arabidopsis thaliana]
147044	ATU008984	ATL8C4958:3342..2929	gap2	ATCEA4S29795	97			g3687245	34	182	1.2e-14	(AC005169) putative ribosomal protein [Arabidopsis

												thaliana]
147045	ATU008985	ATL8C11526:1..440	gap2	ATCEA4S6449	97			g2244975	34	128	2.6e-09	(Z97340) hypothetical protein [Arabidopsis thaliana]
147046	ATU008986	ATL8S5645:1..550	gap2	ATCEA4S32027, ATCEA4S29930	97, 91			g2980765	34	384	1.0e-38	(AL022198) hypothetical protein [Arabidopsis thaliana]
147047	ATU008987	ATL8S26013:1..571	gap2	ATCEA4C105856_1	97			g3915178	34	109	5.4e-07	UBIQUITIN-CONJUGATING ENZYME E2 H10 (UBIQUITIN-PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) [Homo sapiens]
147048	ATU008988	ATL8C3045:11	gap2	ATCEA4S970	97			g2252850	34	815	2.3e-26	(AF013294)

		73..1										contains region of similarity to DNA binding protein [Arabidopsis thaliana]
147049	ATU008989	ATL8C19883:1427..1	gap2	ATCEA4S30031, ATCEA4C72093_1	97, 96	ATL8C19883:1373..1005	0.95	g4680192	33	628	6.2e-57	(AF111710) hypothetical protein [Oryza sativa subsp. indica]
147050	ATU008990	ATL8C37782:1..594	gap2	ATCEA4C11080_1, ATCEA4C55630_1	97, 94	ATL8C37782:48..484	0.90	g2116599	33	133	2.5e-12	(AB003779) leucoanthocyanidin dioxygenase [Perilla frutescens]
147051	ATU008991	ATL8C28977:1..1121	gap2	ATCEA4S6147	97	ATL8C28977:364..1102	0.86	g4544464	33	251	1.9e-29	(AC006580) putative chloroplast nucleoid DNA

												binding protein [Arabidopsis thaliana]
147052	ATU008992	ATL8C3 3566:1 726..1	gap2	ATCEA4 C3327_ 1	97	ATL8C3 3566:1 648..1 4	0.84	g28298 94	33	1786	9.0e-161	(AC002 311) Unknow n protei n [Arabi dopsis thalia na]
147053	ATU008993	ATL8C6 403:1. .1126	gap2	ATCEA4 S13203 , ATCEA4 S36142	97, 86	ATL8C6 403:62 ..1126	0.83	g35137 38	33	242	7.0e-20	(AF080 118) similar to the GDSL family of lipolytic enzymes [Arabidopsis thaliana]
147054	ATU008994	ATL8C2 9513:7 83..11 4	gap2	ATCEA4 C19408 _1	97	ATL8C2 9513:7 83..11 9	0.81	g11685 30	33	466	5.6e-45	SERINE /THREO NINE-PROTEI N KINASE ASK2 [Arabi dopsis thaliana]

147055	ATU008995	ATL8C2 2074:1 ..1176	gap2	ATCEA4 C49557 _1	97	ATL8C2 2074:1 14..78 5	0.78	g4836807	33	106	0.0096	(AF146793) PFT27 [Mus musculus]
147056	ATU008996	ATL8C8 306:21 8..1	gap2	ATCEA4 S1190	97	ATL8C8 306:19 1..77	0.72	g4337201	33	265	3.0e-18	(AC006403) hypothetical protein [Arabidopsis thaliana]
147057	ATU008997	ATL8C4 770:1. .915	gap2	ATCEA4 S14126	97	ATL8C4 770:99 ..824	0.58	g2618684	33	396	5.0e-22	(AC002510) putative UDP-N-acetylglucosamine--dolichyl-phosphate N-acetylglucosaminephosphotransferase [Arabidopsis thaliana]
147058	ATU008998	ATL8C3 9867:1 ..706	gap2	ATCEA4 S13815 , ATCEA4 C74922 _1	97, 92	ATL8C3 9867:2 13..53 8	0.53	g3063709	33	571	4.6e-54	(AL022537) putative protein

												[Arabidopsis thaliana]
147059	ATU008999	ATL8C47066:1477..739	gap2	ATCEA4S1917	97	ATL8C47066:1473..817	0.47	g3402672	33	880	3.5e-81	(AC004697) putative white protein [Arabidopsis thaliana]
147060	ATU009000	ATL8C5486:567..1	gap2	ATCEA4C23645_1	97			g3157941	33	525	1.9e-48	(AC002131) Contains similarity to hypothetical protein gb|U95973 from A. thaliana. [Arabidopsis thaliana]
147061	ATU009001	ATL8C32045:1..824	gap2	ATCEA4S10566	97			g3004555	33	533	9.0e-50	(AC003673) similar to salt inducible protein

												[Arabidopsis thaliana]
147062	ATU009002	ATL8C26:2275..839	gap2	ATCEA4C6771_1	97			g2317907, g3341697	33, 32	69, 151	0.0089, 5.4e-17	(U89959) Mago Nashi-like protein [Arabidopsis thaliana]; (AC003672) hypothetical protein [Arabidopsis thaliana]
147063	ATU009003	ATL8C36200:4567..2929	gap2	ATCEA4C21512_2, ATCEA4S20763	97, 82	ATL8C36200:4386..3597	0.98	g4587516	32	742	1.8e-68	(AC007060) Strong similarity to gb|U80583 proteinase TMP from Lycopersicon esculentum and is a member of the

												PF|00082 subtilase family. [Arabidopsis thaliana]
147064	ATU009004	ATL8C4820:1..530	gap2	ATCEA4C28430_1	97	ATL8C4820:20..364	0.96	g3874563	32	161	4.8e-14	(Z81042) similar to Yeast hypothetical protein YEY6 like; cDNA EST yk206h5.3 comes from this gene; cDNA EST yk206h5.5 comes from this gene; cDNA EST yk303h1.3 comes from this gene; cDNA

												EST yk303h 1.5 comes from this gene; cDNA ... []
147065	ATU009005	ATL8C18482:694..1	gap2	ATCEA4C17416_1	97	ATL8C18482:665..138	0.93	g1237183	32	129	2.0e-09	(D43773) 4-coumarate:coenzyme A ligase [Nicotiana tabacum]
147066	ATU009006	ATL8C8481:3628..2378	gap2	ATCEA4C4635_4, ATCEA4C4635_2, ATCEA4C4635_1	97, 96, 86	ATL8C8481:3596..2562	0.92	g1086069	32	579	1.9e-47	malic enzyme, NADP-dependent - kidney bean []
147067	ATU009007	ATL8S14682:1..402	gap2	ATCEA4S36328	97	ATL8S14682:109..330	0.84	g3915599	32	206	7.4e-22	FLORAL HOMEOTIC PROTEIN AGL3 [Arabidopsis thaliana]
147068	ATU009008	ATL8S20261:484..1	gap2	ATCEA4S11964, ATCEA4C64314_2	97, 91	ATL8S20261:335..59	0.83	g4335752	32	235	1.8e-18	(AC006284) putative myb transcriptio

												n factor -like protei n [Arabi dopsis thalia na]
147069	ATU009 009	ATL8C4 8860:9 54..1	gap2	ATCEA4 S45	97	ATL8C4 8860:8 38..15 8	0.77	g45103 40	32	524	7.5e-40	(AC006 921) hypoth etical protei n [Arabi dopsis thalia na]
147070	ATU009 010	ATL8C1 6190:1 ..1510	gap2	ATCEA4 S36321	97	ATL8C1 6190:3 05..13 22	0.77	g22621 49	32	1220	2.1e-105	(AC002 330) LUMINI DEPEND ENS protei n [Arabi dopsis thalia na]
147071	ATU009 011	ATL8C4 0607:2 85..87 4	gap2	ATCEA4 C16632 _1	97	ATL8C4 0607:4 86..87 4	0.68	g22451 24	32	297	9.9e-30	(Z9734 3) protei n kinase [Arabi dopsis thalia na]
147072	ATU009 012	ATL8C9 842:13 1..147 3	gap2	ATCEA4 C15202 _1, ATCEA4 S35831	97, 84	ATL8C9 842:54 5..104 7	0.62	g32128 67	32	387	6.0e-31	(AC004 005) unknow n protei n

												[Arabidopsis thaliana]
147073	ATU009013	ATL8C26684:1..1722	gap2	ATCEA4C5029_1, ATCEA4C82338_1	97, 87	ATL8C26684:473..1489	0.43	g4006878	32	552	4.1e-36	(Z99707) MAP3K-like protein kinase [Arabidopsis thaliana]
147074	ATU009014	ATL8C45719:214..781	gap2	ATCEA4C23847_1, ATCEA4S15225	97, 92			g3386598	32	198	8.7e-16	(AC004665) putative cytochrome p450 [Arabidopsis thaliana]
147075	ATU009015	ATL8C23390:3..639	gap2	ATCEA4C50128_1	97			g2795806	32	552	5.0e-29	(AC003674) unknown protein [Arabidopsis thaliana]
147076	ATU009016	ATL8C47291:768..1	gap2	ATCEA4S34524	97			g4587990	32	601	1.5e-62	(AF085279) hypothetical protein [Arabidopsis thalia

												na]
147077	ATU009017	ATL8C27165:1302..1	gap2	ATCEA4C20017_1	97			g1731181	32	181	1.2e-07	HYPOTHETICAL 75.5 KD PROTEIN C14A4.3 IN CHROMOSOME II [Caenorhabditis elegans]
147078	ATU009018	ATL8C22175:1..1582	gap2	ATCEA4C33842_1, ATCEA4S3501	97, 95	ATL8C22175:359..1582	0.98	g3075399	31	115	2.1e-09	(AC004484) SF16-like protein [Arabidopsis thaliana]
147079	ATU009019	ATL8S12155:397..1	gap2	ATCEA4C495_1	97	ATL8S12155:115..286	0.95	g2245089	31	599	3.9e-50	(Z97343) asparagine--tRNA ligase homolog [Arabidopsis thaliana]
147080	ATU009020	ATL8C27675:1..1900	gap2	ATCEA4C47238_1	97	ATL8C27675:1..768	0.94	g3036802	31	599		(AL022373) putative protein

												[Arabidopsis thaliana]
147081	ATU009021	ATL8C20026:734..1	gap2	ATCEA4C17_2	97	ATL8C20026:731..240	0.89	g4678348	31	269		(AL049659) putative protein [Arabidopsis thaliana]
147082	ATU009022	ATL8C276:623..1	gap2	ATCEA4C615_1	97	ATL8C276:457..54	0.88	g2230757	31	543	7.0e-19	(Y11969) dnaJ-like protein [Arabidopsis thaliana]
147083	ATU009023	ATL8C31429:1..1643	gap2	ATCEA4S11972	97	ATL8C31429:130..1643	0.88	g4850404	31	1186	9.4e-95	(AC007357) Similar to gb|AF038007 FIC1 gene from Homo sapiens and is a member of the PF|00122 E1-E2 ATPase family.

												ESTs gb|T45045 and gb|AA394473 come from this gene. [Arabidopsis thaliana]
147084	ATU009024	ATL8C16919:440..1	gap2	ATCEA4S5069, ATCEA4C29443_1	97, 85	ATL8C16919:440..104	0.87	g1076579	31	358	5.8e-29	alcohol dehydrogenase homolog ADH3a - tomato []
147085	ATU009025	ATL8C26579:351..1090	gap2	ATCEA4C22389_1	97	ATL8C26579:351..590	0.71	g4455293	31	297	1.3e-34	(AL035528) putative protein [Arabidopsis thaliana]
147086	ATU009026	ATL8C39807:1..533	gap2	ATCEA4S36375	97	ATL8C39807:229..93	0.69	g862642	31	280	1.4e-27	(U20183) MADS-box protein AGL13 [Arabidopsis thalia

												na]
147087	ATU009027	ATL8C5852:1..604	gap2	ATCEA4S12619	97	ATL8C5852:83..368	0.65	g2317729	31	454		(AF013627) reversibly glycosylated polypeptide-1 [Arabidopsis thaliana]
147088	ATU009028	ATL8S13502:508..1	gap2	ATCEA4S2889	97	ATL8S13502:433..167	0.61	g3549681	31	557	1.6e-58	(AL031394) male sterility 2-like protein [Arabidopsis thaliana]
147089	ATU009029	ATL8C37635:301..1508	gap2	ATCEA4C10647_1, ATCEA4C10647_2	97, 97	ATL8C37635:633..1375	0.43	g4544432	31	403	2.3e-23	(AC006955) putative mannose-1-phosphate guanyltransferase [Arabidopsis thaliana]
147090	ATU009030	ATL8C16023:1..751	gap2	ATCEA4S31024	97	ATL8C16023:217..668	0.40	g1531758	31	447	9.6e-48	(X98772) AUX1 [Arabi

												dopsis thaliana]
147091	ATU009031	ATL8S25010:645..1	gap2	ATCEA4C636_1	97			g2492514	31	876	1.8e-37	CELL DIVISION PROTEIN FTSH HOMOLOG PRECURSOR [Arabidopsis thaliana]
147092	ATU009032	ATL8C39159:1..852	gap2	ATCEA4C46566_1	97			g3237304	31	95	2.8e-06	(U91561) pyridoxine 5'-phosphate oxidase [Rattus norvegicus]
147093	ATU009033	ATL8C29575:554..1	gap2	ATCEA4S31700	97			g2979556	31	130	5.0e-14	(AC003680) unknown protein [Arabidopsis thaliana]
147094	ATU009034	ATL8C25841:1..797	gap2	ATCEA4C69825_1	97			g1170601	31	168	0.0012	FRUIT PROTEIN PKIWI502 [Actin

												idia delici osa]
147095	ATU009 035	ATL8C4 7106:1 130..8 61	gap2	ATCEA4 S9362	97			g21296 34	31	178	2.1e-10	lectin -like protei n - Arabid opsis thalia na [Arabi dopsis thalia na]
147096	ATU009 036	ATL8C1 5451:1 ..1443	gap2	ATCEA4 S36348	97	ATL8C1 5451:1 24..13 78	0.97	g28654 22	30	1015	2.3e-75	(AF039 370) chromo methyl ase [Arabi dopsis thalia na]
147097	ATU009 037	ATL8C1 9240:1 498..7 69	gap2	ATCEA4 C6943_ 1	97	ATL8C1 9240:1 278..8 02	0.90	g38607 69	30	392	2.4e-39	(AJ235 270) MITOCH ONDRIA L TRANSP ORTER ATM1 PRECUR SOR (atm1) [Ricke ttsia prowaz ekii]
147098	ATU009 038	ATL8C3 5203:1 ..655	gap2	ATCEA4 S4944	97	ATL8C3 5203:1 17..60 1	0.71	g46891 14	30	272	1.8e-13	(AF077 033) putati ve ATP-depend

												ent RNA helicase ROK1 [Homo sapiens]
147099	ATU009039	ATL8C39157:1090..1	gap2	ATCEA4C28472_1, ATCEA4S30518	97, 92	ATL8C39157:1037..46	0.71	g4006853	30	674	6.4e-56	(Z99707) cytochrome P450-like protein [Arabidopsis thaliana]
147100	ATU009040	ATL8C22334:496..1372	gap2	ATCEA4C1225_1	97	ATL8C22334:705..1315	0.69	g1765899	30	863	3.6e-64	(Y07917) Spot 3 protein [Arabidopsis thaliana]
147101	ATU009041	ATL8C11791:88..1224	gap2	ATCEA4S453, ATCEA4S1416, ATCEA4C5693_1, ATCEA4S34946	97, 96, 89, 82	ATL8C11791:88..1113	0.64	g4586021	30	1078	3.3e-99	(AC007170) putative cytoplasmic aconitate hydratase [Arabidopsis thaliana]
147102	ATU009042	ATL8C26847:1	gap2	ATCEA4C45815	97, 86	ATL8C26847:5	0.42	g4455192	30	357	1.0e-32	(AL035440)

		..980		_1, ATCEA4 C30196 _1		0..720						putative protein [Arabidopsis thaliana]
147103	ATU009043	ATL8C4 459:590..1	gap2	ATCEA4 S3386	97			g3643598	30	294	4.1e-33	(AC005395) putative poly(A) polymerase [Arabidopsis thaliana]
147104	ATU009044	ATL8C3 1986:1273..2998	gap2	ATCEA4 S375	97			g2832658	30	377	1.3e-22	(AL021710) putative protein [Arabidopsis thaliana]
147105	ATU009045	ATL8S1 788:1..611	gap2	ATCEA4 C24035 _1, ATCEA4 C24035 _2	97, 96			g3393062	30	88	9.7e-06	(Y17386) putative In2.1 protein [Triticum aestivum]
147106	ATU009046	ATL8C2 9465:612..1	gap2	ATCEA4 C69974 _1	97			g3885327	30	197	6.3e-20	(AC005623) hypothetical

												protein [Arabidopsis thaliana]
147107	ATU009047	ATL8C44750:31..490	gap2	ATCEA4S1469	97	ATL8C44750:365..490	1.00					
147108	ATU009048	ATL8C27936:628..1	gap2	ATCEA4C48707_1	97	ATL8C27936:628..453	1.00					
147109	ATU009049	ATL8C19789:275..1	gap2	ATCEA4C12138_1	97	ATL8C19789:275..68	1.00					
147110	ATU009050	ATL8C13135:1313..13	gap2	ATCEA4S4395, ATCEA4C36059_1	97, 96	ATL8C13135:1027..13	1.00					
147111	ATU009051	ATL8C16427:2172..1	gap2	ATCEA4C24728_1, ATCEA4S2256, ATCEA4S16661	96, 93, 83	ATL8C16427:2171..256	1.00	g4155634, g881625, g2314269	100, 96, 85	166, 497, 179	2.6e-15, 7.2e-49, 1.3e-14	(AE001532) putative [Helicobacter pylori J99]; (U29432) 22.8 kDa protein [Ipomoea trifida]; (AE000618) conser

												ved hypothetical secreted protein [Helicobacter pylori 26695]
147112	ATU009052	ATL8C46727:46..911	gap2	ATCEA4S29490	97	ATL8C46727:46..669	1.00					
147113	ATU009053	ATL8C27507:128..1735	gap2	ATCEA4S288, ATCEA4S10820	96, 86	ATL8C27507:345..1735	1.00	g3036798	100	2178		(AL022373) putative protein [Arabidopsis thaliana]
147114	ATU009054	ATL8C47133:827..375	gap2	ATCEA4S33074	97	ATL8C47133:824..505	1.00					
147115	ATU009055	ATL8C13930:6345..5012	gap2	ATCEA4C4787_1, ATCEA4C4787_4, ATCEA4S26584, ATCEA4S9458	97, 90, 89, 84	ATL8C13930:6235..5152	1.00					
147116	ATU009056	ATL8C14873:133..751	gap2	ATCEA4C65300_1	97	ATL8C14873:278..505	0.99					

147117	ATU0090057	ATL8C40220:17..1132	gap2	ATCEA4C60845_1	97	ATL8C40220:17..1132	0.99					
147118	ATU0090058	ATL8C49570:1357..1845	gap2	ATCEA4C21030_1	97	ATL8C49570:1357..1824	0.99					
147119	ATU0090059	ATL8S21285:101..472	gap2	ATCEA4C119193_1	97	ATL8S21285:163..451	0.99					
147120	ATU0090060	ATL8C8557:708..146	gap2	ATCEA4C1102_1, ATCEA4S33217	97, 95	ATL8C8557:598..483	0.99					
147121	ATU0090061	ATL8C49160:731..15	gap2	ATCEA4S2810	97	ATL8C49160:458..15	0.99					
147122	ATU0090062	ATL8C20653:608..1197	gap2	ATCEA4S26774, ATCEA4C115479_1	97, 88	ATL8C20653:1129..758	0.99					
147123	ATU0090063	ATL8C3511:1..619	gap2	ATCEA4C32300_1	97	ATL8C3511:196..502	0.99					
147124	ATU0090064	ATL8C48452:15..1639	gap2	ATCEA4C117856_1, ATCEA4S8072	97, 86	ATL8C48452:15..1247	0.99					
147125	ATU0090065	ATL8C10874:3022..130	gap2	ATCEA4C2074_1, ATCEA4S28752, ATCEA4S28485	97, 85, 83	ATL8C10874:2976..407	0.99					
147126	ATU0090066	ATL8C20120:1	gap2	ATCEA4C644_1	97	ATL8C20120:3	0.99					

		..666				07..643						
147127	ATU009067	ATL8C46488:783..1845	gap2	ATCEA4C61305_1, ATCEA4S12987	97, 88	ATL8C46488:960..1845	0.99					
147128	ATU009068	ATL8C31664:640..1	gap2	ATCEA4S32651	97	ATL8C31664:640..208	0.99					
147129	ATU009069	ATL8S30654:142..1	gap2	ATCEA4S7722	97	ATL8S30654:112..23	0.99					
147130	ATU009070	ATL8C33965:2317..64	gap2	ATCEA4C134881_1, ATCEA4C19757_1	97, 93	ATL8C33965:67..360, ATL8C33965:2145..1209	0.99, 0.69					
147131	ATU009071	ATL8C26434:211..568	gap2	ATCEA4C1891_1	97	ATL8C26434:243..328	0.99					
147132	ATU009072	ATL8C9681:104..339	gap2	ATCEA4C29155_1	97	ATL8C9681:107..295	0.99					
147133	ATU009073	ATL8C29338:280..1115	gap2	ATCEA4S7205	97	ATL8C29338:280..1107	0.99					
147134	ATU009074	ATL8C29281:1105..47	gap2	ATCEA4S12904	97	ATL8C29281:1055..47	0.99					
147135	ATU009075	ATL8C33953:987..43	gap2	ATCEA4C5330_1	97	ATL8C33953:963..43	0.99					
147136	ATU009076	ATL8C38001:23..1206	gap2	ATCEA4C45959_1	97	ATL8C38001:278..1206	0.99					

147137	ATU009077	ATL8C13955:6431..8175	gap2	ATCEA4C24509_1, ATCEA4C28496_1, ATCEA4S19030, ATCEA4S33052	97, 91, 90, 89	ATL8C13955:6431..7316	0.99					
147138	ATU009078	ATL8C26972:1263..2170	gap2	ATCEA4C5142_1	97	ATL8C26972:1315..2170	0.99					
147139	ATU009079	ATL8C42072:2150..3228	gap2	ATCEA4S1861	97	ATL8C42072:3228..2150	0.99					
147140	ATU009080	ATL8C35902:1..821	gap2	ATCEA4S11160	97	ATL8C35902:65..821	0.99					
147141	ATU009081	ATL8C6270:923..341	gap2	ATCEA4C37556_1, ATCEA4S2138	97, 84	ATL8C6270:698..351	0.99					
147142	ATU009082	ATL8C22569:1..608	gap2	ATCEA4C965_1	97	ATL8C22569:204..332	0.98					
147143	ATU009083	ATL8C35148:424..1	gap2	ATCEA4S29474	97	ATL8C35148:293..130	0.98					
147144	ATU009084	ATL8C38130:1465..79	gap2	ATCEA4C16187_1, ATCEA4S31696, ATCEA4S35287	97, 92, 89	ATL8C38130:1465..216	0.98					
147145	ATU009	ATL8C1	gap2	ATCEA4	97	ATL8C1	0.98					

	085	9371:1865..440		C12271_1		9371:1858..440						
147146	ATU009086	ATL8C36571:3829..2287	gap2	ATCEA4C10676_1, ATCEA4S26743	97, 83	ATL8C36571:3791..2462	0.98					
147147	ATU009087	ATL8C22150:1438..1	gap2	ATCEA4C18398_1, ATCEA4C56072_1	97, 93	ATL8C22150:1378..229	0.98					
147148	ATU009088	ATL8C21989:422..71	gap2	ATCEA4S29705	97	ATL8C21989:422..219	0.98					
147149	ATU009089	ATL8C22293:3298..2356	gap2	ATCEA4S12097, ATCEA4C669611	97, 96	ATL8C22293:3298..2515	0.98					
147150	ATU009090	ATL8C18842:150..1019	gap2	ATCEA4S445	97	ATL8C18842:404..1019	0.98					
147151	ATU009091	ATL8C2073:3115..6682	gap2	ATCEA4C1976_1, ATCEA4S23664	97, 83	ATL8C2073:3192..6509	0.98					
147152	ATU009092	ATL8C14464:275..1	gap2	ATCEA4C7510_1	97	ATL8C14464:244..152	0.98					
147153	ATU009093	ATL8C24938:1062..105	gap2	ATCEA4C13659_1	97	ATL8C24938:809..105	0.98					
147154	ATU009094	ATL8S6975:524..202	gap2	ATCEA4C896_1	97	ATL8S6975:524..206	0.98					

147155	ATU0090095	ATL8C4256:67..383	gap2	ATCEA4C117572_2	97	ATL8C4256:67..199	0.98					
147156	ATU0090096	ATL8C28078:803..9	gap2	ATCEA4C241981	97	ATL8C28078:801..9	0.98					
147157	ATU0090097	ATL8C4953:601..92	gap2	ATCEA4C62449_1, ATCEA4C62449_2	97, 96	ATL8C4953:601..92	0.98					
147158	ATU0090098	ATL8S20317:253..1	gap2	ATCEA4C6771_1	97	ATL8S20317:222..7	0.98					
147159	ATU0090099	ATL8C14288:1212..390	gap2	ATCEA4C458_1	97	ATL8C14288:1202..710	0.98					
147160	ATU0090100	ATL8S13828:40..513	gap2	ATCEA4C2712_1	97	ATL8S13828:206..378	0.98					
147161	ATU0090101	ATL8C24205:673..1771	gap2	ATCEA4S876	97	ATL8C24205:1771..673	0.97					
147162	ATU0090102	ATL8C48251:889..1692	gap2	ATCEA4C117936_1	97	ATL8C48251:889..1692	0.97					
147163	ATU0090103	ATL8C28308:164..312	gap2	ATCEA4C575_1, ATCEA4C575_2, ATCEA4S31789, ATCEA4S35298	97, 94, 85, 83	ATL8C28308:233..308	0.97					
147164	ATU0090104	ATL8C44318:1	gap2	ATCEA4S26572	97	ATL8C44318:1	0.97					

		183..566				183..722						
147165	ATU009105	ATL8C5349:3274..4296	gap2	ATCEA4S2411	97	ATL8C5349:3325..4296	0.97					
147166	ATU009106	ATL8C46232:1314..817	gap2	ATCEA4S35029	97	ATL8C46232:1314..913	0.97					
147167	ATU009107	ATL8S14481:778..1	gap2	ATCEA4C353_1, ATCEA4S33138	97, 95	ATL8S14481:482..163	0.97					
147168	ATU009108	ATL8C31618:4447..1302	gap2	ATCEA4C90166_1	97	ATL8C31618:4447..1410	0.97					
147169	ATU009109	ATL8C9251:969..1222	gap2	ATCEA4S4432	97	ATL8C9251:1166..1042	0.97					
147170	ATU009110	ATL8C32795:4257..792	gap2	ATCEA4S12163, ATCEA4C23713_1, ATCEA4S12152	97, 96, 92	ATL8C32795:4046..792	0.97					
147171	ATU009111	ATL8C21081:1147..1566	gap2	ATCEA4C9754_1	97	ATL8C21081:1147..1566	0.97					
147172	ATU009112	ATL8C26030:483..989	gap2	ATCEA4C19981_1	97	ATL8C26030:505..981	0.97					
147173	ATU009113	ATL8C19174:2964..4960	gap2	ATCEA4C20813_1, ATCEA4C19269	97, 96, 89	ATL8C19174:3124..4960	0.97					

				_1, ATCEA4 S25856								
147174	ATU009 114	ATL8S2 6912:1 ..443	gap2	ATCEA4 C76859 _1	97	ATL8S2 6912:5 4..443	0.97					
147175	ATU009 115	ATL8C3 5164:7 82..1	gap2	ATCEA4 S6265, ATCEA4 S2157	97, 84	ATL8C3 5164:7 82..21	0.96					
147176	ATU009 116	ATL8C1 6213:1 032..4 52	gap2	ATCEA4 C78_1, ATCEA4 C78_6, ATCEA4 C78_2, ATCEA4 C78_7, ATCEA4 S28150 , ATCEA4 S25133	97, 92, 90, 85, 83, 82	ATL8C1 6213:9 99..66 8	0.96					
147177	ATU009 117	ATL8C9 401:12 11..79 3	gap2	ATCEA4 C4578_ 4, ATCEA4 C4578_ 6	97, 96	ATL8C9 401:11 58..10 06	0.96					
147178	ATU009 118	ATL8C4 3760:2 39..18 37	gap2	ATCEA4 S33115 , ATCEA4 C770_1	96, 94	ATL8C4 3760:3 10..14 39	0.96	g48742 86	100	1688		(AC007 212) putati ve MAP kinase 7 [Arabi dopsis thalia na]
147179	ATU009 119	ATL8C3 4403:1 768..1 000	gap2	ATCEA4 C25298 _1, ATCEA4 S35107	97, 95, 88	ATL8C3 4403:1 558..1 122	0.96					

				, ATCEA4 S25657								
147180	ATU009 120	ATL8C3 1094:3 236..2 423	gap2	ATCEA4 C62826 _1	97	ATL8C3 1094:3 169..2 521	0.96					
147181	ATU009 121	ATL8C4 0133:1 158..3 64	gap2	ATCEA4 S11524	97	ATL8C4 0133:1 158..6 58	0.96					
147182	ATU009 122	ATL8C3 4046:3 86..34 76	gap2	ATCEA4 C1534_ 1, ATCEA4 S33318 , ATCEA4 S28055	97, 93, 88	ATL8C3 4046:5 29..32 56	0.96					
147183	ATU009 123	ATL8C2 9450:2 111..8 66	gap2	ATCEA4 C652_1 , ATCEA4 C652_2	97, 87	ATL8C2 9450:1 949..1 024	0.96					
147184	ATU009 124	ATL8C4 9698:1 21..17 74	gap2	ATCEA4 C11861 7_1	97	ATL8C4 9698:1 21..15 95	0.96					
147185	ATU009 125	ATL8C4 7825:4 84..22 93	gap2	ATCEA4 C8056_ 1	97	ATL8C4 7825:4 84..22 93	0.96					
147186	ATU009 126	ATL8C1 6651:1 655..9 07	gap2	ATCEA4 C45368 _1	97	ATL8C1 6651:1 454..1 009	0.96					
147187	ATU009 127	ATL8C9 197:10 67..1	gap2	ATCEA4 C49524 _1, ATCEA4 S11462	97, 91	ATL8C9 197:10 67..26 8	0.96					
147188	ATU009 128	ATL8C3 870:32 79..21	gap2	ATCEA4 C11946 8_1	97	ATL8C3 870:31 80..21	0.96					

		88				88						
147189	ATU009129	ATL8C32961:1549..138	gap2	ATCEA4C1915_1	97	ATL8C32961:1365..353	0.96					
147190	ATU009130	ATL8C20220:296..3098	gap2	ATCEA4C105531_1, ATCEA4C123072_1, ATCEA4S17427	97, 90, 83	ATL8C20220:2962..296	0.96					
147191	ATU009131	ATL8C33453:298..1956	gap2	ATCEA4C24899_1	96	ATL8C33453:313..1956	0.96	g4567310	100	81	0.021	(AC005956) unknown protein [Arabidopsis thaliana]
147192	ATU009132	ATL8C3560:101..1138	gap2	ATCEA4C0_13, ATCEA4C0_11, ATCEA4S36212	97, 87, 83	ATL8C3560:687..1017	0.96					
147193	ATU009133	ATL8S29406:1..397	gap2	ATCEA4S36304	97	ATL8S29406:27..392	0.96					
147194	ATU009134	ATL8C33740:1..1295	gap2	ATCEA4S33164, ATCEA4C68111_1, ATCEA4S35216	97, 96, 92	ATL8C33740:151..1123	0.95					
147195	ATU009135	ATL8C8480:3679..2028	gap2	ATCEA4S146	97	ATL8C8480:3646..2028	0.95					

147196	ATU0091 36	ATL8C8 332:1. .580	gap2	ATCEA4C23107_1	97	ATL8C8 332:327..490	0.95					
147197	ATU0091 37	ATL8C3 669:13 34..67	gap2	ATCEA4C55793_1, ATCEA4S27851	97, 91	ATL8C3 669:12 27..32 9	0.95					
147198	ATU0091 38	ATL8C1 1970:9 37..29 4	gap2	ATCEA4S11200	97	ATL8C1 1970:9 37..29 4	0.95					
147199	ATU0091 39	ATL8S6 378:92 ..546	gap2	ATCEA4C29587_1	97	ATL8S6 378:96 ..432	0.95					
147200	ATU0091 40	ATL8C1 141:21 5..842	gap2	ATCEA4C70_1, ATCEA4S32217, ATCEA4S8178, ATCEA4S34300, ATCEA4C70_3	97, 94, 94, 89, 88	ATL8C1 141:27 2..545	0.95					
147201	ATU0091 41	ATL8C6 265:1. .1654	gap2	ATCEA4S29997, ATCEA4C50715_1	97, 96	ATL8C6 265:35 0..150 2	0.95					
147202	ATU0091 42	ATL8C3 6196:5 379..2 589	gap2	ATCEA4S4961, ATCEA4C13745_1, ATCEA4S31272, ATCEA4S35054	97, 94, 91, 85	ATL8C3 6196:4 920..3 035	0.95					
147203	ATU009	ATL8C1	gap2	ATCEA4	97, 87	ATL8C1	0.95					

	143	3445:5214..4036		C15653_2, ATCEA4C15653_1		3445:5097..4188						
147204	ATU009144	ATL8C26174:22..535	gap2	ATCEA4S2761	97	ATL8C26174:22..245	0.95					
147205	ATU009145	ATL8C34862:1718..4013	gap2	ATCEA4C53812_1, ATCEA4S31179, ATCEA4S8343, ATCEA4S32354	97, 92, 90, 89	ATL8C34862:1779..3772	0.95					
147206	ATU009146	ATL8C27041:3238..2426	gap2	ATCEA4C93300_1, ATCEA4S28235	97, 82	ATL8C27041:3110..2560	0.95					
147207	ATU009147	ATL8C47171:642..1065	gap2	ATCEA4S18675, ATCEA4C22047_1	97, 92	ATL8C47171:651..1030	0.95					
147208	ATU009148	ATL8C48405:1..705	gap2	ATCEA4C48529_1	97	ATL8C48405:30..705	0.95					
147209	ATU009149	ATL8C841:89..1243	gap2	ATCEA4C5917_1, ATCEA4S22585	97, 82	ATL8C841:110..1097	0.95					
147210	ATU009150	ATL8C49449:291..1493	gap2	ATCEA4C35705_1, ATCEA4C16448_1, ATCEA4	97, 97, 95, 93, 93, 85	ATL8C49449:442..1076	0.95					

				S13698, ATCEA4S21216, ATCEA4S17119, ATCEA4S29482								
147211	ATU009151	ATL8C37850:1348..1	gap2	ATCEA4C30514_1	97	ATL8C37850:1348..164	0.94					
147212	ATU009152	ATL8C47386:1720..1318	gap2	ATCEA4S5487	97	ATL8C47386:1718..1318	0.94					
147213	ATU009153	ATL8C37434:4324..1	gap2	ATCEA4C84238_1, ATCEA4C9171_2, ATCEA4C9171_1	96, 88, 85	ATL8C37434:4255..138	0.94	g4836893	100	2390		(AC007369) pyrophosphate-dependent phosphofructokinase alpha subunit [Arabidopsis thaliana]
147214	ATU009154	ATL8C35010:1..1160	gap2	ATCEA4C32872_1	97	ATL8C35010:141..1160	0.94					
147215	ATU009155	ATL8C28283:1..595	gap2	ATCEA4S11413, ATCEA4	97, 95	ATL8C28283:570..458	0.94					

				C36240_1								
147216	ATU009156	ATL8S3692:317..726	gap2	ATCEA4C14988_1	97	ATL8S3692:339..625	0.94					
147217	ATU009157	ATL8C8780:518..1	gap2	ATCEA4C70358_1	97	ATL8C8780:518..32	0.94					
147218	ATU009158	ATL8C31623:1064..192	gap2	ATCEA4C27426_1	97	ATL8C31623:550..213	0.94					
147219	ATU009159	ATL8S11179:1..200	gap2	ATCEA4C111246_2, ATCEA4C111246_1	97, 97	ATL8S11179:171..43	0.94					
147220	ATU009160	ATL8C6607:607..1089	gap2	ATCEA4S30636	97	ATL8C6607:857..1089	0.94					
147221	ATU009161	ATL8C41586:750..1307	gap2	ATCEA4C4514_1, ATCEA4S11426	97, 83	ATL8C41586:863..1225	0.94					
147222	ATU009162	ATL8C49870:475..248	gap2	ATCEA4C4119_5, ATCEA4C4119_1, ATCEA4C4119_4, ATCEA4S3332, ATCEA4S7119, ATCEA4S13116	97, 94, 92, 91, 89, 85	ATL8C49870:377..252	0.94					
147223	ATU009163	ATL8S3508:1.	gap2	ATCEA4C48041	97, 94,	ATL8S3508:18	0.94					

		.771		_2, ATCEA4S24807, ATCEA4S25444, ATCEA4C48041_1	90, 86	0..558						
147224	ATU009164	ATL8C38832:1150..1	gap2	ATCEA4C31187_1, ATCEA4S30107	97, 91	ATL8C38832:1097..314	0.94					
147225	ATU009165	ATL8C23196:3089..78	gap2	ATCEA4S2727, ATCEA4S2269	97, 92	ATL8C23196:3089..216	0.94					
147226	ATU009166	ATL8C23777:776..2964	gap2	ATCEA4C27639_1, ATCEA4C63441_1	96, 93	ATL8C23777:973..2951	0.94	g1621467	100	2188	3.2e-227	(U73106) laccase [Liriodendron tulipifera]
147227	ATU009167	ATL8C27367:2008..1	gap2	ATCEA4C355_1, ATCEA4C120961_2, ATCEA4C120961_1	97, 93, 92	ATL8C27367:1925..723	0.94					
147228	ATU009168	ATL8C16212:680..1	gap2	ATCEA4C19850_1	97	ATL8C16212:680..9	0.93					
147229	ATU009169	ATL8C16745:425..4938	gap2	ATCEA4C2124_1	97	ATL8C16745:427..4901	0.93					

147230	ATU009170	ATL8C19527:543..8	gap2	ATCEA4C23970_1	97	ATL8C19527:497..8	0.93					
147231	ATU009171	ATL8C33701:2604..86	gap2	ATCEA4S30151, ATCEA4S33397	96, 95	ATL8C33701:2604..86	0.93	g2664198	100	1240	4.7e-120	(AJ003215) GTL1 [Arabidopsis thaliana]
147232	ATU009172	ATL8C36259:4152..760	gap2	ATCEA4C67527_1, ATCEA4S12325	97, 88	ATL8C36259:3057..760, ATL8C36259:4083..3935	0.93, 0.56					
147233	ATU009173	ATL8C34657:908..65	gap2	ATCEA4C7176_1	97	ATL8C34657:873..65	0.93					
147234	ATU009174	ATL8C34310:1..753	gap2	ATCEA4S2320, ATCEA4S31245, ATCEA4S4957	97, 92, 87	ATL8C34310:278..489	0.93					
147235	ATU009175	ATL8C24978:584..102	gap2	ATCEA4C1726_2, ATCEA4C1726_1	97, 96	ATL8C24978:582..103	0.93					
147236	ATU009176	ATL8C28274:1..1227	gap2	ATCEA4C45643_1	97	ATL8C28274:54..1227	0.93					
147237	ATU009177	ATL8C36818:1766..208	gap2	ATCEA4C11059_1, ATCEA4S33742	97, 96	ATL8C36818:1766..530	0.93					
147238	ATU009	ATL8C6	gap2	ATCEA4	96,	ATL8C6	0.93	g11725	100	874	1.4e-	34 KD

	178	489:3472..1287		C3145_2, ATCEA4C3145_1, ATCEA4C3145_4, ATCEA4S35527, ATCEA4C3145_3	94, 93, 93, 93	489:3328..1471		55			77	OUTER MITOCHONDRIAL MEMBRANE PROTEIN PORIN (VOLTAGE-DEPENDENT ANION-SELECTIVE CHANNEL PROTEIN) (VDAC) (POM 34) [Solanum tuberosum]
147239	ATU009179	ATL8C34701:1..1262	gap2	ATCEA4C34152_1	97	ATL8C34701:295..1262	0.93					
147240	ATU009180	ATL8C33869:846..2351	gap2	ATCEA4S29663, ATCEA4C2501_1, ATCEA4S33337, ATCEA4S9351	97, 95, 89, 84	ATL8C33869:868..2154	0.93					
147241	ATU009181	ATL8C22250:1985..3	gap2	ATCEA4C62587_1,	97, 97, 96	ATL8C22250:1968..1	0.93					

		7		ATCEA4C62587_3, ATCEA4C62587_2		69						
147242	ATU009182	ATL8C48091:794..302	gap2	ATCEA4S539	97	ATL8C48091:694..302	0.93					
147243	ATU009183	ATL8C19805:1..743	gap2	ATCEA4C19917_1	97	ATL8C19805:246..743	0.93					
147244	ATU009184	ATL8C25711:83..1552	gap2	ATCEA4C41689_1, ATCEA4S1487	97, 96	ATL8C25711:83..1552	0.93					
147245	ATU009185	ATL8C34556:510..1503	gap2	ATCEA4C15073_1, ATCEA4C51054_1	97, 89	ATL8C34556:541..1486	0.93					
147246	ATU009186	ATL8C27319:2517..1851	gap2	ATCEA4C44268_1, ATCEA4S5168	97, 94	ATL8C27319:2428..1851	0.93					
147247	ATU009187	ATL8C18686:1161..692	gap2	ATCEA4C6831_4, ATCEA4C6831_1	97, 88	ATL8C18686:1115..976	0.93					
147248	ATU009188	ATL8C18527:70..1489	gap2	ATCEA4C4597_1	97	ATL8C18527:70..1489	0.92					
147249	ATU009189	ATL8C48106:1..513	gap2	ATCEA4C17218_2, ATCEA4	97, 96, 87	ATL8C48106:86..295	0.92					

				S30793, ATCEA4 S6740								
147250	ATU009190	ATL8C15919:339..628	gap2	ATCEA4 C19199_1	97	ATL8C15919:339..586	0.92					
147251	ATU009191	ATL8C15471:53..5667	gap2	ATCEA4 S27135	97	ATL8C15471:5667..53	0.92					
147252	ATU009192	ATL8C43716:6415..1112	gap2	ATCEA4 S1910, ATCEA4 S424	97, 97	ATL8C43716:6415..1112	0.92					
147253	ATU009193	ATL8C44768:79..962	gap2	ATCEA4 C9394_1, ATCEA4 S36000	97, 93	ATL8C44768:79..781	0.92					
147254	ATU009194	ATL8C47109:1860..110	gap2	ATCEA4 S9917	97	ATL8C47109:1433..110	0.92					
147255	ATU009195	ATL8C5164:1356..122	gap2	ATCEA4 C21039_1	97	ATL8C5164:1025..122	0.92					
147256	ATU009196	ATL8C4948:130..1437	gap2	ATCEA4 C81815_1, ATCEA4 S34403	97, 89	ATL8C4948:130..1203	0.92					
147257	ATU009197	ATL8C21847:1287..2118	gap2	ATCEA4 S30166	97	ATL8C21847:1287..2100	0.92					
147258	ATU009198	ATL8C10630:2111..130	gap2	ATCEA4 S31839	97	ATL8C10630:2111..130	0.92					
147259	ATU009199	ATL8C14675:1	gap2	ATCEA4 C21889	97	ATL8C14675:1	0.92					

		..678		_1		60..670						
147260	ATU009200	ATL8C4028:143..600	gap2	ATCEA4S26536	97	ATL8C4028:147..600	0.92					
147261	ATU009201	ATL8C16977:7373..6094	gap2	ATCEA4C93584_1, ATCEA4C22458_1	97, 93	ATL8C16977:7109..6259	0.92					
147262	ATU009202	ATL8C28451:677..1	gap2	ATCEA4C631_2, ATCEA4C631_1	97, 97	ATL8C28451:465..336	0.92					
147263	ATU009203	ATL8C27073:1..588	gap2	ATCEA4C30710_1	97	ATL8C27073:44..333	0.92					
147264	ATU009204	ATL8C7974:1..676	gap2	ATCEA4C93652_1	97	ATL8C7974:58..546	0.92					
147265	ATU009205	ATL8S30786:324..1	gap2	ATCEA4S12352, ATCEA4C6521_1	97, 94	ATL8S30786:324..263	0.92					
147266	ATU009206	ATL8C16984:1170..577	gap2	ATCEA4S30969	97	ATL8C16984:1170..638	0.92					
147267	ATU009207	ATL8C665:1..1424	gap2	ATCEA4C2115_1, ATCEA4C2115_2	97, 85	ATL8C665:134..1055	0.91					
147268	ATU009208	ATL8C15787:427..1	gap2	ATCEA4C28460_1, ATCEA4S25960	97, 82	ATL8C15787:265..22	0.91					
147269	ATU009	ATL8C2	gap2	ATCEA4	97	ATL8C2	0.91					

	209	8347:303..997		S7010		8347:363..997						
147270	ATU009210	ATL8C23207:1402..1821	gap2	ATCEA4C6065_1, ATCEA4S20173	97, 87	ATL8C23207:1649..1413	0.91					
147271	ATU009211	ATL8C34244:1403..643	gap2	ATCEA4C17024_1	97	ATL8C34244:1086..697	0.91					
147272	ATU009212	ATL8C5819:1472..2667	gap2	ATCEA4C16094_1, ATCEA4S35423	97, 85	ATL8C5819:1476..2667	0.91					
147273	ATU009213	ATL8C29829:672..23	gap2	ATCEA4S2628	97	ATL8C29829:663..23	0.91					
147274	ATU009214	ATL8C12499:1..810	gap2	ATCEA4C13557_1	97	ATL8C12499:365..810	0.91					
147275	ATU009215	ATL8C14491:1..1595	gap2	ATCEA4C1088_1	97	ATL8C14491:66..1428	0.91					
147276	ATU009216	ATL8C21180:5669..1350	gap2	ATCEA4C122787_1	97	ATL8C21180:5669..1350	0.91					
147277	ATU009217	ATL8C36965:1332..3958	gap2	ATCEA4S14181, ATCEA4S5670	97, 94	ATL8C36965:1332..3793	0.91					
147278	ATU009218	ATL8C4588:1..1441	gap2	ATCEA4C1440_1, ATCEA4S23784	97, 93	ATL8C4588:21..976	0.91					
147279	ATU009219	ATL8C15473:1	gap2	ATCEA4C23361	97, 91	ATL8C15473:1	0.91					

		04..3207		_1, ATCEA4S31908		04..3067						
147280	ATU009220	ATL8C12963:1050..68	gap2	ATCEA4C99307_1, ATCEA4S2515	97, 96	ATL8C12963:986..474	0.91					
147281	ATU009221	ATL8C48057:3923..667	gap2	ATCEA4C46516_1, ATCEA4C5844_1, ATCEA4S6795	97, 97, 89	ATL8C48057:3923..670	0.91					
147282	ATU009222	ATL8C35659:219..4742	gap2	ATCEA4C8234_1, ATCEA4S23797, ATCEA4S14983	96, 92, 82	ATL8C35659:219..4193	0.91	g2494143	100	1429	3.7e-111	(AC002329) Mlo-like protein [Arabidopsis thaliana]
147283	ATU009223	ATL8C28556:1..1322	gap2	ATCEA4C66120_1	97	ATL8C28556:86..1322	0.91					
147284	ATU009224	ATL8C4045:103..689	gap2	ATCEA4C30481_1	97	ATL8C4045:334..689	0.91					
147285	ATU009225	ATL8C530:1013..1	gap2	ATCEA4C137356_1	97	ATL8C530:976..8	0.90					
147286	ATU009226	ATL8C22676:63..1848	gap2	ATCEA4C121255_1	97	ATL8C22676:63..1805	0.90					
147287	ATU009227	ATL8C48648:2466..59	gap2	ATCEA4S5642	97	ATL8C48648:2466..59	0.90					

147288	ATU009228	ATL8C26157:233..1107	gap2	ATCEA4C6284_1	97	ATL8C26157:236..1107	0.90					
147289	ATU009229	ATL8C24969:785..57	gap2	ATCEA4C8409_1	97	ATL8C24969:785..78	0.90					
147290	ATU009230	ATL8C45938:1..577	gap2	ATCEA4S5887, ATCEA4C13267_1, ATCEA4S11403	97, 96, 91	ATL8C45938:232..379	0.90					
147291	ATU009231	ATL8C4436:2975..29	gap2	ATCEA4S26362, ATCEA4S32899, ATCEA4C45990_1	97, 94, 90	ATL8C4436:2930..29	0.90					
147292	ATU009232	ATL8C7603:1..3658	gap2	ATCEA4C688_1	97	ATL8C7603:53..3630	0.90					
147293	ATU009233	ATL8C17278:1688..1	gap2	ATCEA4C11375_1, ATCEA4C5549_1, ATCEA4S20007, ATCEA4S34871	97, 95, 84, 84	ATL8C17278:1442..39	0.90					
147294	ATU009234	ATL8C28163:596..1	gap2	ATCEA4S7273	97	ATL8C28163:401..30	0.90					
147295	ATU009235	ATL8C20851:1..936	gap2	ATCEA4C1023_1	97	ATL8C20851:124..828	0.90					

147296	ATU0092 36	ATL8C9 016:83 4..249 9	gap2	ATCEA4 C5672_ 1, ATCEA4 C92440 _1	97, 97	ATL8C9 016:83 4..248 3	0.90					
147297	ATU0092 37	ATL8C3 8931:7 93..1	gap2	ATCEA4 S14349	97	ATL8C3 8931:7 93..20 5	0.90					
147298	ATU0092 38	ATL8C3 7236:7 8..107 5	gap2	ATCEA4 S13597 , ATCEA4 S17567	97, 97	ATL8C3 7236:7 8..561	0.90					
147299	ATU0092 39	ATL8C2 6346:7 43..96 3	gap2	ATCEA4 C61927 _1	97	ATL8C2 6346:8 22..92 3	0.90					
147300	ATU0092 40	ATL8C2 7373:2 967..1 036	gap2	ATCEA4 S26319 , ATCEA4 S4659	97, 95	ATL8C2 7373:2 967..1 196	0.90					
147301	ATU0092 41	ATL8C2 3701:1 101..6 9	gap2	ATCEA4 C15011 _1, ATCEA4 C5138_ 1	97, 83	ATL8C2 3701:8 11..69	0.89					
147302	ATU0092 42	ATL8C4 8572:1 333..8 5	gap2	ATCEA4 C2115_ 1	97	ATL8C4 8572:1 331..8 5	0.89					
147303	ATU0092 43	ATL8C3 0282:1 ..1527	gap2	ATCEA4 C12653 _1, ATCEA4 C10575 2_1, ATCEA4 S32658	97, 96, 94	ATL8C3 0282:4 5..139 8	0.89					
147304	ATU0092 44	ATL8C2 4159:1	gap2	ATCEA4 S2209	97	ATL8C2 4159:9	0.89					

		138..137				89..137						
147305	ATU0092245	ATL8C25686:33..2263	gap2	ATCEA4C12238_1	97	ATL8C25686:98..2263	0.89					
147306	ATU0092246	ATL8C944:28..2058	gap2	ATCEA4S6182, ATCEA4S5241	97, 85	ATL8C944:28..2058	0.89					
147307	ATU0092247	ATL8C8062:426..1311	gap2	ATCEA4C4468_2, ATCEA4C4468_1	97, 91	ATL8C8062:554..1250	0.89					
147308	ATU0092248	ATL8C27826:1093..28	gap2	ATCEA4S10845	97	ATL8C27826:1093..45	0.89					
147309	ATU0092249	ATL8C20337:1111..928	gap2	ATCEA4C5924_1, ATCEA4S10352	97, 94	ATL8C20337:995..928	0.89					
147310	ATU0092250	ATL8S20334:80..167	gap2	ATCEA4C40473_1	97	ATL8S20334:80..165	0.89					
147311	ATU0092251	ATL8C38035:3347..2315	gap2	ATCEA4C131077_1, ATCEA4C28569_1	97, 97	ATL8C38035:3235..2585	0.89					
147312	ATU0092252	ATL8C27296:1186..102	gap2	ATCEA4C2017_1, ATCEA4S10640, ATCEA4S1976	97, 92, 92	ATL8C27296:861..239	0.89					
147313	ATU0092253	ATL8C4117:33	gap2	ATCEA4C85579	97	ATL8C4117:33	0.89					

		10..25 96		_1		10..28 03						
147314	ATU009 254	ATL8C8 538:26 95..15 72	gap2	ATCEA4 S11770	97	ATL8C8 538:26 95..15 72	0.89					
147315	ATU009 255	ATL8C3 1866:6 5..220 7	gap2	ATCEA4 C34563 _1, ATCEA4 S34230	97, 97	ATL8C3 1866:6 5..220 7	0.89					
147316	ATU009 256	ATL8C3 9622:5 44..35 9	gap2	ATCEA4 C10970 _1	97	ATL8C3 9622:4 71..35 9	0.89					
147317	ATU009 257	ATL8C3 7028:1 ..804	gap2	ATCEA4 C11941 _1	97	ATL8C3 7028:1 70..56 9	0.89					
147318	ATU009 258	ATL8C1 2248:1 134..4 9	gap2	ATCEA4 C33285 _1, ATCEA4 S7412	97, 86	ATL8C1 2248:1 069..4 9	0.89					
147319	ATU009 259	ATL8C4 3497:7 41..1	gap2	ATCEA4 C11755 9_1	97	ATL8C4 3497:7 41..11	0.89					
147320	ATU009 260	ATL8C4 1639:1 467..6 0	gap2	ATCEA4 S4936	97	ATL8C4 1639:1 467..6 0	0.89					
147321	ATU009 261	ATL8C6 84:111 5..173	gap2	ATCEA4 C29531 _1	97	ATL8C6 84:103 1..173	0.89					
147322	ATU009 262	ATL8S1 658:47 1..85	gap2	ATCEA4 S12606	97	ATL8S1 658:47 1..256	0.89					
147323	ATU009 263	ATL8C7 711:11 46..64	gap2	ATCEA4 S2095	97	ATL8C7 711:11 46..64	0.89					
147324	ATU009 264	ATL8C2 9318:2 0..107 7	gap2	ATCEA4 C5145_ 1	97	ATL8C2 9318:2 3..107 7	0.89					

147325	ATU0092 65	ATL8C13216:32..1155	gap2	ATCEA4C10797_1	97	ATL8C13216:32..1123	0.89					
147326	ATU0092 66	ATL8C17516:1343..303	gap2	ATCEA4C116612_1	97	ATL8C17516:1343..313	0.88					
147327	ATU0092 67	ATL8C34231:596..952	gap2	ATCEA4C73053_1	97	ATL8C34231:662..952	0.88					
147328	ATU0092 68	ATL8C36602:139..698	gap2	ATCEA4S3274, ATCEA4S30886	97, 93	ATL8C36602:307..698	0.88					
147329	ATU0092 69	ATL8C43767:1..920	gap2	ATCEA4C1184_1	97	ATL8C43767:2..908	0.88					
147330	ATU0092 70	ATL8C8907:79..746	gap2	ATCEA4C44160_1, ATCEA4C117328_1	97, 89	ATL8C8907:85..691	0.88					
147331	ATU0092 71	ATL8C26388:1290..888	gap2	ATCEA4C29117_1	97	ATL8C26388:1114..943	0.88					
147332	ATU0092 72	ATL8C7878:57..3682	gap2	ATCEA4C21435_1, ATCEA4C68940_1, ATCEA4C101796_1	97, 95, 87	ATL8C7878:57..3214	0.88					
147333	ATU0092 73	ATL8C17012:46..1268	gap2	ATCEA4S14792	97	ATL8C17012:46..1065	0.88					
147334	ATU0092 74	ATL8C50003:8	gap2	ATCEA4C31051	97	ATL8C50003:7	0.88					

		21..579		_1		85..579						
147335	ATU009275	ATL8C23452:49..2178	gap2	ATCEA4S33331, ATCEA4S30975	97, 95	ATL8C23452:49..1933	0.88					
147336	ATU009276	ATL8C33092:1887..830	gap2	ATCEA4C118952_1, ATCEA4C118952_2	97, 96	ATL8C33092:1844..981	0.88					
147337	ATU009277	ATL8C38552:149..708	gap2	ATCEA4C111077_1	97	ATL8C38552:149..704	0.88					
147338	ATU009278	ATL8C48739:179..1590	gap2	ATCEA4S3054	97	ATL8C48739:179..1590	0.87					
147339	ATU009279	ATL8C16626:1676..733	gap2	ATCEA4S35231	97	ATL8C16626:1676..1233	0.87					
147340	ATU009280	ATL8S6528:1..619	gap2	ATCEA4C8713_1, ATCEA4C38346_1, ATCEA4S30048	97, 96, 93	ATL8S6528:66..264	0.87					
147341	ATU009281	ATL8C46619:807..2884	gap2	ATCEA4S29778, ATCEA4C71466_1	97, 92	ATL8C46619:807..2834	0.87					
147342	ATU009282	ATL8C17933:435..116	gap2	ATCEA4S1429	97	ATL8C17933:357..116	0.87					
147343	ATU009	ATL8C1	gap2	ATCEA4	97	ATL8C1	0.87					

	283	6951:1529..750		S23941		6951:1529..955						
147344	ATU009284	ATL8C36413:662..28	gap2	ATCEA4C12726_1	97	ATL8C36413:619..28	0.87					
147345	ATU009285	ATL8C23961:1366..1	gap2	ATCEA4C103681_1, ATCEA4S6648, ATCEA4C8034_1	97, 94, 94	ATL8C23961:1366..168	0.87					
147346	ATU009286	ATL8C2521:535..1671	gap2	ATCEA4S1106, ATCEA4C5826_1	97, 96	ATL8C2521:558..1028	0.87					
147347	ATU009287	ATL8S2274:67..313	gap2	ATCEA4S7100	97	ATL8S2274:67..115	0.87					
147348	ATU009288	ATL8C31934:253..2738	gap2	ATCEA4S3301, ATCEA4S22556, ATCEA4C6052_1	97, 89, 87	ATL8C31934:253..2738	0.87					
147349	ATU009289	ATL8C35621:1316..187	gap2	ATCEA4S6862	97	ATL8C35621:1316..188	0.87					
147350	ATU009290	ATL8C47139:1..858	gap2	ATCEA4C6378_1	97	ATL8C47139:270..858	0.87					
147351	ATU009291	ATL8C20882:491..1	gap2	ATCEA4C102212_1, ATCEA4S22214,	97, 85, 83	ATL8C20882:475..133	0.87					

				ATCEA4S2576								
147352	ATU009292	ATL8C11373:1..694	gap2	ATCEA4C82400_1, ATCEA4S15316, ATCEA4S15331	97, 93, 84	ATL8C11373:3..610	0.87					
147353	ATU009293	ATL8C45268:1..1191	gap2	ATCEA4S1892	97	ATL8C45268:67..1191	0.87					
147354	ATU009294	ATL8C13435:1..683	gap2	ATCEA4C84342_1	97	ATL8C13435:214..471	0.87					
147355	ATU009295	ATL8C39570:1203..3792	gap2	ATCEA4S1086	97	ATL8C39570:1203..3792	0.87					
147356	ATU009296	ATL8C38172:2449..51	gap2	ATCEA4C23105_1, ATCEA4C60991_1	97, 97	ATL8C38172:2444..51	0.87					
147357	ATU009297	ATL8C1178:97..1021	gap2	ATCEA4S29737	97	ATL8C1178:244..1021	0.87					
147358	ATU009298	ATL8C26151:342..54	gap2	ATCEA4S629	97	ATL8C26151:308..54	0.87					
147359	ATU009299	ATL8C23635:263..3348	gap2	ATCEA4C117274_1	97	ATL8C23635:263..3348	0.86					
147360	ATU009300	ATL8C27444:1..1160	gap2	ATCEA4C67522_1, ATCEA4S11944	97, 96	ATL8C27444:19..955	0.86					

147361	ATU0093 01	ATL8C37761:136..775	gap2	ATCEA4C42565_1	97	ATL8C37761:195..775	0.86					
147362	ATU0093 02	ATL8C22726:1711..783	gap2	ATCEA4C14218_1	97	ATL8C22726:1688..783	0.86					
147363	ATU0093 03	ATL8C29062:543..1	gap2	ATCEA4S11511, ATCEA4C28058_1	97, 97	ATL8C29062:489..282	0.86					
147364	ATU0093 04	ATL8C5831:2004..1033	gap2	ATCEA4C1486_1, ATCEA4S13512	97, 94	ATL8C5831:1874..1278	0.86					
147365	ATU0093 05	ATL8S12959:1..554	gap2	ATCEA4C17617_1	97	ATL8S12959:55..176	0.86					
147366	ATU0093 06	ATL8C13769:580..1849	gap2	ATCEA4C11582_1	97	ATL8C13769:979..1804	0.86					
147367	ATU0093 07	ATL8C30675:405..3663	gap2	ATCEA4S3089	97	ATL8C30675:527..3663	0.86					
147368	ATU0093 08	ATL8C41221:1585..1	gap2	ATCEA4S32313, ATCEA4C120276_2, ATCEA4C120276_1	97, 97, 95	ATL8C41221:1585..16	0.86					
147369	ATU0093 09	ATL8C22471:843..1678	gap2	ATCEA4C1985_1, ATCEA4S23899	97, 93	ATL8C22471:850..1341	0.86					

147370	ATU009310	ATL8C47929:3187..262	gap2	ATCEA4C120754_1, ATCEA4S8397, ATCEA4C3865_1, ATCEA4C122587_1, ATCEA4S7658	97, 95, 93, 82, 82	ATL8C47929:2999..262	0.86					
147371	ATU009311	ATL8C316:53..314	gap2	ATCEA4S30123	97	ATL8C316:56..163	0.86					
147372	ATU009312	ATL8S3148:1..407	gap2	ATCEA4C597491	97	ATL8S3148:244..55	0.86					
147373	ATU009313	ATL8C41171:320..1	gap2	ATCEA4S147	97	ATL8C41171:320..26	0.86					
147374	ATU009314	ATL8C32543:2168..1493	gap2	ATCEA4C124429_1	97	ATL8C32543:2168..1493	0.86					
147375	ATU009315	ATL8C15273:1365..610	gap2	ATCEA4C82187_1	97	ATL8C15273:1365..799	0.86					
147376	ATU009316	ATL8C15619:3362..1296	gap2	ATCEA4S1857	97	ATL8C15619:3362..1296	0.86					
147377	ATU009317	ATL8C44589:1837..334	gap2	ATCEA4C129481_1	97	ATL8C44589:1837..334	0.86					
147378	ATU009318	ATL8C8728:1..929	gap2	ATCEA4C33241_1	97	ATL8C8728:209..571	0.86					
147379	ATU009319	ATL8C1698:2148..1	gap2	ATCEA4C1486_1,	97, 96	ATL8C1698:2066..56	0.85					

				ATCEA4C80546_3								
147380	ATU009320	ATL8C35711:3559..9033	gap2	ATCEA4S29131, ATCEA4S6573, ATCEA4C117695_1, ATCEA4S31947, ATCEA4C117694_1, ATCEA4S8180	97, 97, 92, 90, 89, 85	ATL8C35711:3585..8993	0.85					
147381	ATU009321	ATL8C15984:305..3386	gap2	ATCEA4C1339_1, ATCEA4S5321	97, 91	ATL8C15984:305..3109	0.85					
147382	ATU009322	ATL8C4361:365..1	gap2	ATCEA4S34134, ATCEA4S212, ATCEA4C3486_1	97, 94, 88	ATL8C4361:318..9	0.85					
147383	ATU009323	ATL8C7605:3067..668	gap2	ATCEA4C1689_1, ATCEA4S36047, ATCEA4S9574	96, 94, 84	ATL8C7605:2766..738	0.85	g3421123	100	1059	8.8e-109	(AF043538) 20S proteasome beta subunit PBG1 [Arabidopsis thaliana]

147384	ATU009324	ATL8C16505:1079..497	gap2	ATCEA4C98104_1	97	ATL8C16505:949..665	0.85					
147385	ATU009325	ATL8C45751:1..2824	gap2	ATCEA4C17111_3, ATCEA4C83488_1, ATCEA4C64757_1, ATCEA4S29730	97, 94, 92, 85	ATL8C45751:927..2824	0.85					
147386	ATU009326	ATL8C34090:1016..1	gap2	ATCEA4S7721, ATCEA4C13839_1	97, 91	ATL8C34090:925..95	0.85					
147387	ATU009327	ATL8C44474:3866..333	gap2	ATCEA4S32320	97	ATL8C44474:3866..333	0.85					
147388	ATU009328	ATL8C23564:1..304	gap2	ATCEA4S36341	97	ATL8C23564:28..151	0.85					
147389	ATU009329	ATL8C44687:1411..335	gap2	ATCEA4C24565_1	97	ATL8C44687:1391..335	0.85					
147390	ATU009330	ATL8C27738:381..1311	gap2	ATCEA4S707	97	ATL8C27738:381..1279	0.85					
147391	ATU009331	ATL8C28048:323..780	gap2	ATCEA4C17898_1	97	ATL8C28048:472..780	0.85					
147392	ATU009332	ATL8C47876:2244..143	gap2	ATCEA4S5905	97	ATL8C47876:2244..143	0.85					
147393	ATU009	ATL8C1	gap2	ATCEA4	97, 88	ATL8C1	0.85					

	333	0693:795..1		C1946_1, ATCEA4S7860		0693:770..18						
147394	ATU009334	ATL8C23536:864..431	gap2	ATCEA4S26613	97	ATL8C23536:864..555	0.85					
147395	ATU009335	ATL8C26069:563..1337	gap2	ATCEA4C1116_1	97	ATL8C26069:793..933	0.85					
147396	ATU009336	ATL8C43607:992..1	gap2	ATCEA4C34539_1	97	ATL8C43607:992..9	0.85					
147397	ATU009337	ATL8C9583:1751..1	gap2	ATCEA4C122779_1, ATCEA4C72377_1, ATCEA4S13497, ATCEA4S31313	97, 97, 93, 87	ATL8C9583:1751..496	0.85					
147398	ATU009338	ATL8C17269:2153..1	gap2	ATCEA4C55929_1, ATCEA4S34544, ATCEA4C24776_1	97, 95, 84	ATL8C17269:2145..18	0.85					
147399	ATU009339	ATL8C4174:2513..328	gap2	ATCEA4C745_1	97	ATL8C4174:1825..1021	0.85					
147400	ATU009340	ATL8C4245:186..1839	gap2	ATCEA4C20506_1	97	ATL8C4245:186..1692	0.85					
147401	ATU009	ATL8C3	gap2	ATCEA4	97	ATL8C3	0.85					

	341	7504:1..2575		S36321		7504:384..2404						
147402	ATU009342	ATL8C49215:254..531	gap2	ATCEA4C8618_1	97	ATL8C49215:254..361	0.85					
147403	ATU009343	ATL8C47855:35..1070	gap2	ATCEA4S4885	97	ATL8C47855:35..1070	0.85					
147404	ATU009344	ATL8C49800:2866..4170	gap2	ATCEA4S6781, ATCEA4C269291	97, 85	ATL8C49800:2866..4039	0.85					
147405	ATU009345	ATL8C1575:1457..173	gap2	ATCEA4S4561	97	ATL8C1575:1239..173	0.85					
147406	ATU009346	ATL8C23295:2137..63	gap2	ATCEA4C1584_5, ATCEA4C1584_1, ATCEA4C1584_3, ATCEA4S33977, ATCEA4C1584_6, ATCEA4S10015	97, 95, 95, 92, 87, 83	ATL8C23295:2054..586	0.84					
147407	ATU009347	ATL8C44940:2726..1	gap2	ATCEA4C108332_1, ATCEA4S12316, ATCEA4	97, 96, 96, 92	ATL8C44940:2686..221	0.84					

				C10522_1, ATCEA4C139605_1								
147408	ATU009348	ATL8C29782:1190..248	gap2	ATCEA4S29865	97	ATL8C29782:1023..248	0.84					
147409	ATU009349	ATL8C5340:2062..168	gap2	ATCEA4S33785	97	ATL8C5340:2062..711	0.84					
147410	ATU009350	ATL8C20327:1..1494	gap2	ATCEA4C869_1	97	ATL8C20327:175..1469	0.84					
147411	ATU009351	ATL8C29271:984..5400	gap2	ATCEA4C17789_1, ATCEA4S32668	97, 90	ATL8C29271:1019..5400	0.84					
147412	ATU009352	ATL8C30611:1789..1	gap2	ATCEA4C44122_1	97	ATL8C30611:1789..92	0.84					
147413	ATU009353	ATL8C34154:834..1	gap2	ATCEA4S10265	97	ATL8C34154:834..134	0.84					
147414	ATU009354	ATL8C32906:911..54	gap2	ATCEA4C46203_1, ATCEA4S23480	97, 83	ATL8C32906:911..346	0.84					
147415	ATU009355	ATL8C26111:2730..1109	gap2	ATCEA4C88041_1, ATCEA4S4144, ATCEA4C18908_1	97, 96, 96	ATL8C26111:2081..1233	0.84					
147416	ATU009	ATL8C1	gap2	ATCEA4	97, 96	ATL8C1	0.84					

	356	6253:1871..292		S27669, ATCEA4C35107_1		6253:1871..408						
147417	ATU009357	ATL8C34532:1..1627	gap2	ATCEA4C25056_1, ATCEA4S30958	97, 82	ATL8C34532:22..1419	0.84					
147418	ATU009358	ATL8C11241:1963..1	gap2	ATCEA4C26804_1	97	ATL8C11241:1963..259	0.84					
147419	ATU009359	ATL8C12471:1886..1	gap2	ATCEA4S11046, ATCEA4S15295	97, 95	ATL8C12471:1886..145	0.84					
147420	ATU009360	ATL8C24656:2529..59	gap2	ATCEA4C85524_1, ATCEA4C25269_1	97, 96	ATL8C24656:2482..307	0.84					
147421	ATU009361	ATL8C19285:1452..979	gap2	ATCEA4C27461_1	97	ATL8C19285:1386..979	0.84					
147422	ATU009362	ATL8C47787:2099..3554	gap2	ATCEA4C39166_1	97	ATL8C47787:2099..3554	0.84					
147423	ATU009363	ATL8C32694:526..824	gap2	ATCEA4C103557_1	97	ATL8C32694:526..674	0.84					
147424	ATU009364	ATL8C31135:3782..7777	gap2	ATCEA4S2200	97	ATL8C31135:3782..7777	0.84					
147425	ATU009365	ATL8C40402:28..113	gap2	ATCEA4C4386_1	97	ATL8C40402:696..11	0.84					

		0				24						
147426	ATU0093 66	ATL8C10 626:15 78..39	gap2	ATCEA4S30120, ATCEA4C18567_1	97, 95	ATL8C10 626:13 95..39	0.84					
147427	ATU0093 67	ATL8C9 005:1. .1057	gap2	ATCEA4C1102_1	97	ATL8C9 005:23 ..875	0.84					
147428	ATU0093 68	ATL8C2 3683:8 ..2241	gap2	ATCEA4C1777_1, ATCEA4S33551, ATCEA4C128081_1, ATCEA4S9392, ATCEA4S32788, ATCEA4C28239_1	97, 96, 94, 83, 83, 82	ATL8C2 3683:8 ..2047	0.84					
147429	ATU0093 69	ATL8C4 1371:4 28..1	gap2	ATCEA4C11379_1	97	ATL8C4 1371:4 07..83	0.84					
147430	ATU0093 70	ATL8C4 2489:7 08..82	gap2	ATCEA4C75321_1, ATCEA4S23137, ATCEA4S23139	97, 95, 88	ATL8C4 2489:7 08..82	0.84					
147431	ATU0093 71	ATL8C3 2940:1 350..26	gap2	ATCEA4S5478, ATCEA4S34894	97, 90	ATL8C3 2940:1 268..52 4	0.83					
147432	ATU0093 72	ATL8C9 478:14	gap2	ATCEA4S2748	97	ATL8C9 478:14	0.83					

		26..136				26..136						
147433	ATU009373	ATL8C25334:841..1442	gap2	ATCEA4C20181_1	97	ATL8C25334:898..1323	0.83					
147434	ATU009374	ATL8C22030:508..2391	gap2	ATCEA4S10533	97	ATL8C22030:508..2391	0.83					
147435	ATU009375	ATL8C44554:1786..4853	gap2	ATCEA4C87265_1, ATCEA4C87265_2, ATCEA4C30980_1	97, 95, 84	ATL8C44554:1786..4357	0.83					
147436	ATU009376	ATL8C43080:545..86	gap2	ATCEA4C1950_1, ATCEA4S27938	97, 85	ATL8C43080:507..294	0.83					
147437	ATU009377	ATL8C4170:2806..614	gap2	ATCEA4C10076_1, ATCEA4S16876	97, 86	ATL8C4170:2806..849	0.83					
147438	ATU009378	ATL8C15394:1..1581	gap2	ATCEA4S3376	97	ATL8C15394:202..1581	0.83					
147439	ATU009379	ATL8C10738:2496..1909	gap2	ATCEA4C1215_1	97	ATL8C10738:2429..1909	0.83					
147440	ATU009380	ATL8C5709:808..1	gap2	ATCEA4C17081_2, ATCEA4S16958	97, 94	ATL8C5709:775..279	0.83					
147441	ATU009381	ATL8C11759:1	gap2	ATCEA4S36257	97	ATL8C11759:1	0.83					

		883..1				883..99						
147442	ATU009382	ATL8C2340:82..1715	gap2	ATCEA4C405_1, ATCEA4S25924, ATCEA4S32686, ATCEA4S31047	97, 96, 91, 90	ATL8C2340:137..1715	0.83					
147443	ATU009383	ATL8C17467:1442..1	gap2	ATCEA4C20457_1	97	ATL8C17467:908..537	0.83					
147444	ATU009384	ATL8C45867:1..4447	gap2	ATCEA4C118046_1, ATCEA4C102129_1, ATCEA4S29945, ATCEA4S25155, ATCEA4S35763	96, 95, 95, 87, 83	ATL8C45867:167..4420	0.83	g4544403, g4039155	100, 100	938, 496	4.3e-101, 2.1e-43	(AC007047) putative glucan endo-1,3-beta-D-glucosidase precursor [Arabidopsis thaliana]; (AF104258) putative copper-inducible 35.6 kDa protei

												n [Festuca rubra]
147445	ATU009385	ATL8C25053:1..1326	gap2	ATCEA4C1116_1	97	ATL8C25053:46..1234	0.83					
147446	ATU009386	ATL8S10656:509..25	gap2	ATCEA4S1516	97	ATL8S10656:200..48	0.83					
147447	ATU009387	ATL8C24802:3127..1445	gap2	ATCEA4C62581_2, ATCEA4C62581_1	97, 91	ATL8C24802:3097..1753	0.83					
147448	ATU009388	ATL8C38083:110..699	gap2	ATCEA4C616_1	97	ATL8C38083:183..697	0.83					
147449	ATU009389	ATL8C25238:337..1110	gap2	ATCEA4S2232	97	ATL8C25238:687..1110	0.83					
147450	ATU009390	ATL8C3357:38..3262	gap2	ATCEA4C1862_1	97	ATL8C3357:273..3044	0.83					
147451	ATU009391	ATL8C12327:1750..299	gap2	ATCEA4C52960_1, ATCEA4C17175_1	97, 90	ATL8C12327:1707..425	0.82					
147452	ATU009392	ATL8C29406:1..974	gap2	ATCEA4C61587_1, ATCEA4C105490_1	97, 97	ATL8C29406:131..785	0.82					
147453	ATU009393	ATL8C45656:135..36	gap2	ATCEA4S1467	97	ATL8C45656:135..30	0.82					

		4				6						
147454	ATU009394	ATL8C39283:117..1445	gap2	ATCEA4C60991_1	97	ATL8C39283:117..1363	0.82					
147455	ATU009395	ATL8C48869:31..746	gap2	ATCEA4C78524_1, ATCEA4S34642	97, 88	ATL8C48869:31..623	0.82					
147456	ATU009396	ATL8C15583:823..1773	gap2	ATCEA4S143	97	ATL8C15583:823..1773	0.82					
147457	ATU009397	ATL8C43701:4956..1330	gap2	ATCEA4S5650, ATCEA4S33349, ATCEA4C34958_1	97, 95, 91	ATL8C43701:4956..1465	0.82					
147458	ATU009398	ATL8S13241:1..343	gap2	ATCEA4C46964_1	97	ATL8S13241:121..302	0.82					
147459	ATU009399	ATL8C34328:2197..858	gap2	ATCEA4S31392	97	ATL8C34328:1890..858	0.82					
147460	ATU009400	ATL8C16094:1087..1	gap2	ATCEA4S8672	97	ATL8C16094:1087..82	0.82					
147461	ATU009401	ATL8C28639:355..614	gap2	ATCEA4S1241	97	ATL8C28639:384..614	0.82					
147462	ATU009402	ATL8C16456:205..827	gap2	ATCEA4S7633	97	ATL8C16456:205..827	0.82					
147463	ATU009403	ATL8C12544:5	gap2	ATCEA4C706_1	97	ATL8C12544:5	0.82					

		58..155				44..157						
147464	ATU0094 04	ATL8C46641:609..968	gap2	ATCEA4C35227_1	97	ATL8C46641:659..968	0.82					
147465	ATU0094 05	ATL8C46652:1012..607	gap2	ATCEA4C118660_1	97	ATL8C46652:917..729	0.82					
147466	ATU0094 06	ATL8C1368:3503..2504	gap2	ATCEA4S4428	97	ATL8C1368:3327..2504	0.82					
147467	ATU0094 07	ATL8C2858:52..570	gap2	ATCEA4C4002_1	97	ATL8C2858:52..454	0.82					
147468	ATU0094 08	ATL8C3961:683..98	gap2	ATCEA4S3120	97	ATL8C3961:653..98	0.82					
147469	ATU0094 09	ATL8C36876:2609..1	gap2	ATCEA4S13165, ATCEA4S26724, ATCEA4S4977, ATCEA4C43475_1	96, 96, 95, 83	ATL8C36876:2609..513	0.82	g2317725	100	307	1.7e-24	(AF015811) putative lysophosphatidic acid acyltransferase [Mus musculus]
147470	ATU0094 10	ATL8C37133:420..1629	gap2	ATCEA4C225_1	97	ATL8C37133:720..1574	0.82					
147471	ATU0094 11	ATL8C4224:1001..1	gap2	ATCEA4S28397, ATCEA4C2487_5,	97, 90, 84	ATL8C4224:1001..407	0.82					

				ATCEA4S33022								
147472	ATU009412	ATL8C10083:404..1	gap2	ATCEA4S5830	97	ATL8C10083:396..12	0.81					
147473	ATU009413	ATL8C4742:1078..112	gap2	ATCEA4S10660, ATCEA4C928_1, ATCEA4S35371	97, 95, 92	ATL8C4742:943..454	0.81					
147474	ATU009414	ATL8C7584:300..547	gap2	ATCEA4S32526, ATCEA4S28888	97, 85	ATL8C7584:383..464	0.81					
147475	ATU009415	ATL8C19673:70..1017	gap2	ATCEA4C1467_1	97	ATL8C19673:94..882	0.81					
147476	ATU009416	ATL8C48976:294..817	gap2	ATCEA4C116267_1	97	ATL8C48976:721..519	0.81					
147477	ATU009417	ATL8C35201:699..1144	gap2	ATCEA4C12713_1, ATCEA4S13168	97, 92	ATL8C35201:796..1065	0.81					
147478	ATU009418	ATL8C50100:878..1	gap2	ATCEA4S1181	97	ATL8C50100:878..159	0.81					
147479	ATU009419	ATL8C13701:315..984	gap2	ATCEA4C60734_1	97	ATL8C13701:348..984	0.81					
147480	ATU009420	ATL8C30158:206..1589	gap2	ATCEA4C117929_1, ATCEA4S31352	97, 92	ATL8C30158:206..1306	0.81					

147481	ATU0094 21	ATL8C23 593:1 183..1	gap2	ATCEA4S12741, ATCEA4C9188_1	97, 92	ATL8C23 593:1 183..29	0.81					
147482	ATU0094 22	ATL8S14 275:2 13..506	gap2	ATCEA4C5949_1	97	ATL8S14 275:2 99..435	0.81					
147483	ATU0094 23	ATL8C27 977:6 1..912	gap2	ATCEA4S32194	97	ATL8C27 977:6 1..833	0.81					
147484	ATU0094 24	ATL8C39 453:1 030..1 47	gap2	ATCEA4S8374	97	ATL8C39 453:1 030..1 47	0.81					
147485	ATU0094 25	ATL8C35 007:7 365..1 972	gap2	ATCEA4C117595_1, ATCEA4C86921_1, ATCEA4C17606_1, ATCEA4C117594_1, ATCEA4C117595_2, ATCEA4S4099	97, 96, 94, 92, 92, 88	ATL8C35 007:7 365..2 118	0.81					
147486	ATU0094 26	ATL8C47 098:6 55..1	gap2	ATCEA4C1808_2, ATCEA4C1808_1	97, 85	ATL8C47 098:3 70..17	0.81					
147487	ATU0094 27	ATL8S21 158:1 50..532	gap2	ATCEA4C13521_1	97	ATL8S21 158:1 74..477	0.81					

147488	ATU009428	ATL8C54:3579..1892	gap2	ATCEA4C2812_1, ATCEA4S27118, ATCEA4S33951, ATCEA4C2812_4, ATCEA4S10674, ATCEA4C2812_3, ATCEA4S10121, ATCEA4S28592, ATCEA4S10152	97, 95, 95, 91, 91, 90, 83, 83, 82	ATL8C54:3398..2109	0.81					
147489	ATU009429	ATL8C38219:882..189	gap2	ATCEA4S5287	97	ATL8C38219:865..650	0.81					
147490	ATU009430	ATL8C36542:1..1142	gap2	ATCEA4C115561_1	97	ATL8C36542:70..1142	0.81					
147491	ATU009431	ATL8S3925:434..1	gap2	ATCEA4C18778_1	97	ATL8S3925:373..178	0.81					
147492	ATU009432	ATL8C7320:1..635	gap2	ATCEA4S10966, ATCEA4C642141	97, 94	ATL8C7320:155..622	0.81					
147493	ATU009	ATL8C3	gap2	ATCEA4	97,	ATL8C3	0.80					

	433	749:3438..1345		C116757_1, ATCEA4S8273, ATCEA4S32400	83, 82	749:3378..1345						
147494	ATU009434	ATL8C1639:1613..3918	gap2	ATCEA4S247, ATCEA4S1315	97, 97	ATL8C1639:1613..3918	0.80					
147495	ATU009435	ATL8S22981:1..465	gap2	ATCEA4C5216_3	97	ATL8S22981:104..212	0.80					
147496	ATU009436	ATL8C27762:1749..1	gap2	ATCEA4S8616, ATCEA4C81163_1, ATCEA4C66617_1, ATCEA4S31486, ATCEA4C102691_2, ATCEA4S35837, ATCEA4S25438	97, 95, 94, 94, 94, 89, 83	ATL8C27762:1692..473	0.80					
147497	ATU009437	ATL8C25695:1543..1	gap2	ATCEA4S5509, ATCEA4S5840	97, 97	ATL8C25695:1543..260	0.80					
147498	ATU009438	ATL8C40123:43..1197	gap2	ATCEA4C384_1	97	ATL8C40123:99..886	0.80					
147499	ATU009439	ATL8C24249:91..198	gap2	ATCEA4S3004	96	ATL8C24249:91..195	0.80	g4490316	100	846	7.2e-80	(AL035678) nucell

		4				7						in-like protein [Arabidopsis thaliana]
147500	ATU009440	ATL8C31790:57..3815	gap2	ATCEA4C10914_1, ATCEA4C131_4, ATCEA4S6181	97, 95, 83	ATL8C31790:57..3815	0.80					
147501	ATU009441	ATL8C18165:113..547	gap2	ATCEA4S9370	97	ATL8C18165:113..536	0.80					
147502	ATU009442	ATL8C23446:1188..108	gap2	ATCEA4S6805, ATCEA4S7398	96, 90	ATL8C23446:1069..108	0.80	g4538930	100	1008	1.7e-96	(AL049483) putative peroxidase [Arabidopsis thaliana]
147503	ATU009443	ATL8C31063:120..2506	gap2	ATCEA4C1681_1, ATCEA4C1681_4, ATCEA4C1681_3	96, 96, 90	ATL8C31063:379..2430	0.80	g3421102	100	1081	2.2e-74	(AF043530) 20S proteasome beta subunit PBB1 [Arabidopsis thaliana]
147504	ATU009444	ATL8C17767:1	gap2	ATCEA4S36222	97	ATL8C17767:7	0.80					

		..696				6..565						
147505	ATU009445	ATL8C492:1023..1748	gap2	ATCEA4C896_1, ATCEA4C896_2	97, 92	ATL8C492:1438..1191	0.80					
147506	ATU009446	ATL8C14223:32..960	gap2	ATCEA4C121053_1	97	ATL8C14223:100..960	0.80					
147507	ATU009447	ATL8C21146:5..968	gap2	ATCEA4S31859	97	ATL8C21146:5..967	0.80					
147508	ATU009448	ATL8C1607:1721..5392	gap2	ATCEA4C7953_2, ATCEA4C7953_1	97, 93	ATL8C1607:1813..5392	0.80					
147509	ATU009449	ATL8C15161:1504..1	gap2	ATCEA4S29077, ATCEA4C119354_1	97, 95	ATL8C15161:1497..263	0.80					
147510	ATU009450	ATL8C42474:2071..999	gap2	ATCEA4C34071_2, ATCEA4C34071_1, ATCEA4S17855	97, 88, 82	ATL8C42474:2071..1203	0.80					
147511	ATU009451	ATL8C45001:88..825	gap2	ATCEA4C24938_1	97	ATL8C45001:88..718	0.79					
147512	ATU009452	ATL8C40737:962..1609	gap2	ATCEA4C12845_1, ATCEA4S5276	97, 89	ATL8C40737:1009..1601	0.79					
147513	ATU009453	ATL8C16122:419..26	gap2	ATCEA4C70108_1,	97, 89	ATL8C16122:461..26	0.79					

		21		ATCEA4S2264		21						
147514	ATU009454	ATL8C22808:385..1	gap2	ATCEA4C11484_1	97	ATL8C22808:254..7	0.79					
147515	ATU009455	ATL8C29902:414..1	gap2	ATCEA4C130811_1	97	ATL8C29902:404..312	0.79					
147516	ATU009456	ATL8C27331:2996..1231	gap2	ATCEA4C20628_1	97	ATL8C27331:2996..1231	0.79					
147517	ATU009457	ATL8C25420:2116..15	gap2	ATCEA4C4705_1	97	ATL8C25420:2083..15	0.79					
147518	ATU009458	ATL8C6499:172..1566	gap2	ATCEA4C4654_1	97	ATL8C6499:172..1566	0.79					
147519	ATU009459	ATL8C3262:6863..4211	gap2	ATCEA4C84423_1	97	ATL8C3262:6514..4211	0.79					
147520	ATU009460	ATL8C30728:3450..525	gap2	ATCEA4C75058_1, ATCEA4S13841	96, 87	ATL8C30728:3450..709	0.79	g3152581	100	1097	9.8e-118	(AC002986) Similar to E. coli sulfurtransferase (rhodanese) gb|AE00338. ESTs gb|T03984, gb|T03983 and

												gb|W43228 come from this gene. [Arabidopsis thaliana]
147521	ATU009461	ATL8C26908:259..650	gap2	ATCEA4C37278_1	97	ATL8C26908:412..600	0.79					
147522	ATU009462	ATL8C2047:455..1511	gap2	ATCEA4S251, ATCEA4C54117_1, ATCEA4S8196, ATCEA4S1359	97, 93, 91, 87	ATL8C2047:1126..1480	0.79					
147523	ATU009463	ATL8C40070:1101..50	gap2	ATCEA4S1693	97	ATL8C40070:1058..50	0.79					
147524	ATU009464	ATL8C40659:222..1027	gap2	ATCEA4C21497_1	97	ATL8C40659:290..1010	0.79					
147525	ATU009465	ATL8C13466:982..2333	gap2	ATCEA4S36221	97	ATL8C13466:982..2333	0.79					
147526	ATU009466	ATL8C41138:37..407	gap2	ATCEA4S12361	97	ATL8C41138:47..395	0.79					
147527	ATU009467	ATL8C22822:2624..177	gap2	ATCEA4S253	96	ATL8C22822:2179..177	0.79	g4038066, g4733987	100, 99	118, 166	0.99, 1.4e-10	(AC005897) hypothetical protein

												[Arabidopsis thaliana]; (AC007209) hypothetical protein [Arabidopsis thaliana]
147528	ATU009468	ATL8C1860:238..1197	gap2	ATCEA4C3038_1, ATCEA4S19124	97, 96	ATL8C1860:361..1164	0.79					
147529	ATU009469	ATL8C10386:1816..151	gap2	ATCEA4C21800_1	97	ATL8C10386:1816..151	0.79					
147530	ATU009470	ATL8C24484:1588..1	gap2	ATCEA4S5463	97	ATL8C24484:1588..352	0.78					
147531	ATU009471	ATL8C50051:929..245	gap2	ATCEA4S14627, ATCEA4C1047_1	97, 96	ATL8C50051:833..448	0.78					
147532	ATU009472	ATL8C24422:53..580	gap2	ATCEA4C1904_2	97	ATL8C24422:384..456	0.78					
147533	ATU009473	ATL8C29345:427..633	gap2	ATCEA4C22771_1	97	ATL8C29345:427..633	0.78					
147534	ATU009474	ATL8C9571:1742..45	gap2	ATCEA4S2452	97	ATL8C9571:1742..45	0.78					

147535	ATU009475	ATL8C23407:4525..1397	gap2	ATCEA4S33319, ATCEA4S30965, ATCEA4C53167_1	96, 96, 96	ATL8C23407:3415..1643	0.78	g3329368	100	1177	2.3e-113	(AF031244) nodulin-like protein [Arabidopsis thaliana]
147536	ATU009476	ATL8C44900:1441..166	gap2	ATCEA4C22635_1, ATCEA4S23499, ATCEA4S34120	97, 88, 82	ATL8C44900:1219..242	0.78					
147537	ATU009477	ATL8C44293:2617..1308	gap2	ATCEA4S33580, ATCEA4C126940_1	97, 96	ATL8C44293:2617..1346	0.78					
147538	ATU009478	ATL8C12895:586..15	gap2	ATCEA4C5154_1	97	ATL8C12895:385..15	0.78					
147539	ATU009479	ATL8C48230:1..1977	gap2	ATCEA4C11362_1, ATCEA4S23086, ATCEA4S21891	97, 93, 82	ATL8C48230:597..1445	0.78					
147540	ATU009480	ATL8C6415:241..2079	gap2	ATCEA4S13092, ATCEA4S30876, ATCEA4S35198	96, 87, 85	ATL8C6415:241..2041	0.78	g4586102	100	1647	4.5e-119	(AL049638) putative protein [Arabidopsis thalia

												na]
147541	ATU009481	ATL8C39133:2427..963	gap2	ATCEA4C4353_3, ATCEA4C4353_1, ATCEA4C4353_2	96, 90, 90	ATL8C39133:2373..1125	0.78	g1931639	100	554	4.5e-59	(U95973) lysophosphol ipase isolog [Arabidopsis thaliana]
147542	ATU009482	ATL8C20647:2010..1	gap2	ATCEA4C32769_1, ATCEA4C76190_1	97, 95	ATL8C20647:2010..279	0.78					
147543	ATU009483	ATL8C21133:1..1927	gap2	ATCEA4C17333_1	97	ATL8C21133:145..1927	0.78					
147544	ATU009484	ATL8C10928:1052..1	gap2	ATCEA4C28375_1	97	ATL8C10928:1052..310	0.78					
147545	ATU009485	ATL8S22520:591..389	gap2	ATCEA4C50785_1	97	ATL8S22520:478..389	0.78					
147546	ATU009486	ATL8C48045:1322..195	gap2	ATCEA4C2282_1	97	ATL8C48045:1298..195	0.77					
147547	ATU009487	ATL8C38560:1369..182	gap2	ATCEA4C61391_1	97	ATL8C38560:1369..702	0.77					
147548	ATU009488	ATL8C36141:250..2784	gap2	ATCEA4C11632_1	97	ATL8C36141:250..2784	0.77					
147549	ATU009489	ATL8C1989:2636..1	gap2	ATCEA4C7573_2,	97, 91, 90, 89	ATL8C1989:2062..27	0.77					

				ATCEA4C7573_3, ATCEA4C7573_1, ATCEA4C7573_4		6						
147550	ATU009490	ATL8C7084:101..1194	gap2	ATCEA4S26374	97	ATL8C7084:101..1073	0.77					
147551	ATU009491	ATL8C17007:2316..1	gap2	ATCEA4C40088_1	97	ATL8C17007:1530..204	0.77					
147552	ATU009492	ATL8C36307:32..963	gap2	ATCEA4C26426_1, ATCEA4S3832	97, 95	ATL8C36307:90..805	0.77					
147553	ATU009493	ATL8C3726:1..1622	gap2	ATCEA4S4385	97	ATL8C3726:69..1622	0.77					
147554	ATU009494	ATL8C44554:5683..4814	gap2	ATCEA4S36254	97	ATL8C44554:5622..4951	0.77					
147555	ATU009495	ATL8C48631:115..1452	gap2	ATCEA4S466, ATCEA4C116148_1	97, 95	ATL8C48631:120..1452	0.77					
147556	ATU009496	ATL8C5440:2215..1	gap2	ATCEA4C32851_2, ATCEA4C32851_1	97, 96	ATL8C5440:2215..400	0.77					
147557	ATU009497	ATL8C15525:2239..597	gap2	ATCEA4C119203_1	97	ATL8C15525:2239..991	0.77					

147558	ATU009498	ATL8C4134:2803..299	gap2	ATCEA4C6802_1, ATCEA4S7403	97, 93	ATL8C4134:2793..299	0.77					
147559	ATU009499	ATL8S14062:413..1	gap2	ATCEA4C775_1	97	ATL8S14062:231..86	0.77					
147560	ATU009500	ATL8C4059:827..346	gap2	ATCEA4S34064	97	ATL8C4059:827..346	0.77					
147561	ATU009501	ATL8C12757:70..3275	gap2	ATCEA4S33425	97	ATL8C12757:70..2963	0.77					
147562	ATU009502	ATL8S1892:277..1	gap2	ATCEA4S6836, ATCEA4C17631_1	97, 96	ATL8S1892:263..26	0.77					
147563	ATU009503	ATL8C11770:2010..1	gap2	ATCEA4C127585_1, ATCEA4C116016_1, ATCEA4S35519	97, 94, 89	ATL8C11770:1923..532	0.77					
147564	ATU009504	ATL8S1936:496..1	gap2	ATCEA4C823_1	97	ATL8S1936:339..32	0.77					
147565	ATU009505	ATL8C27451:1..232	gap2	ATCEA4S11295	97	ATL8C27451:53..232	0.77					
147566	ATU009506	ATL8C12190:1..623	gap2	ATCEA4S5452, ATCEA4C543_15, ATCEA4C543_1	97, 96, 96	ATL8C12190:261..618	0.77					
147567	ATU009507	ATL8C43800:1..663	gap2	ATCEA4S237	97	ATL8C43800:426..66	0.77					

						3						
147568	ATU0095 08	ATL8C43270:532..27	gap2	ATCEA4C14001_1	97	ATL8C43270:464..27	0.77					
147569	ATU0095 09	ATL8C41365:609..1	gap2	ATCEA4C34710_1, ATCEA4S11116	97, 95	ATL8C41365:357..29	0.77					
147570	ATU0095 10	ATL8C16222:666..748	gap2	ATCEA4C75517_1	97	ATL8C16222:666..615	0.76					
147571	ATU0095 11	ATL8C18295:221..529	gap2	ATCEA4S27407	97	ATL8C18295:221..472	0.76					
147572	ATU0095 12	ATL8C12912:31..668	gap2	ATCEA4C4260_1	97	ATL8C12912:147..629	0.76					
147573	ATU0095 13	ATL8C5911:3906..2125	gap2	ATCEA4C31781_1	97	ATL8C5911:3906..2125	0.76					
147574	ATU0095 14	ATL8S12881:1..597	gap2	ATCEA4C22734_1, ATCEA4S22009	97, 86	ATL8S12881:267..578	0.76					
147575	ATU0095 15	ATL8C39525:980..1	gap2	ATCEA4C47877_1, ATCEA4C28885_2	97, 84	ATL8C39525:288..42	0.76					
147576	ATU0095 16	ATL8C45727:1..978	gap2	ATCEA4C44407_1	97	ATL8C45727:666..978	0.76					
147577	ATU0095 17	ATL8C37372:508..1837	gap2	ATCEA4C5439_2, ATCEA4C5439_1	97, 88	ATL8C37372:556..1821	0.76					

147578	ATU009518	ATL8C4954:1685..57	gap2	ATCEA4S5659, ATCEA4S31202, ATCEA4S27329, ATCEA4S30669	97, 93, 91, 83	ATL8C4954:1685..57	0.76					
147579	ATU009519	ATL8C11386:6689..4335	gap2	ATCEA4C69724_1, ATCEA4S15728	97, 82	ATL8C11386:6689..4463	0.76					
147580	ATU009520	ATL8C35631:212..2960	gap2	ATCEA4C5520_5, ATCEA4S20928, ATCEA4C93718_1, ATCEA4C48900_1, ATCEA4S35747, ATCEA4C5520_1, ATCEA4S7708	96, 96, 94, 92, 90, 89, 84	ATL8C35631:427..2578	0.76	g2583124	100	2107	7.9e-204	(AC002387) 5-enolpyruvylshikimate-3-phosphate synthase (EPSP) [Arabidopsis thaliana]
147581	ATU009521	ATL8C13416:127..2945	gap2	ATCEA4S13490, ATCEA4S32956	97, 90	ATL8C13416:127..2460	0.76					
147582	ATU009522	ATL8C22507:1..904	gap2	ATCEA4C8343_1, ATCEA4S34992	97, 96, 96	ATL8C22507:259..904	0.76					

				, ATCEA4 C10825 _1								
147583	ATU009 523	ATL8C2 4840:4 19..39 14	gap2	ATCEA4 C98134 _1	96	ATL8C2 4840:4 19..37 19	0.76	g35229 61	100	1299	1.8e-127	(AC004 411) putati ve pto kinase [Arabi dopsis thalia na]
147584	ATU009 524	ATL8S2 9757:1 ..751	gap2	ATCEA4 C11612 5_1	97	ATL8S2 9757:1 37..53 9	0.76					
147585	ATU009 525	ATL8C2 4377:1 293..1	gap2	ATCEA4 C10378 4_1	97	ATL8C2 4377:1 293..1 94	0.76					
147586	ATU009 526	ATL8C4 9481:1 ..1303	gap2	ATCEA4 C673_1	97	ATL8C4 9481:2 65..12 42	0.76					
147587	ATU009 527	ATL8C2 2479:1 232..9 11	gap2	ATCEA4 S8776	97	ATL8C2 2479:1 070..9 11	0.76					
147588	ATU009 528	ATL8C3 6200:2 503..1	gap2	ATCEA4 C55490 _1, ATCEA4 C7143_ 1	97, 97	ATL8C3 6200:2 374..2 62	0.76					
147589	ATU009 529	ATL8S2 098:47 4..1	gap2	ATCEA4 S1199	97	ATL8S2 098:47 4..115	0.76					
147590	ATU009 530	ATL8C1 0476:3 752..2 695	gap2	ATCEA4 C25927 _1	97	ATL8C1 0476:3 752..2 695	0.76					
147591	ATU009 531	ATL8C4 4790:1	gap2	ATCEA4 C50402	97	ATL8C4 4790:1	0.76					

		158..1021		_1		122..1028						
147592	ATU009532	ATL8C33962:7550..6250	gap2	ATCEA4C74781_1	97	ATL8C33962:7550..6601	0.76					
147593	ATU009533	ATL8C29981:976..2447	gap2	ATCEA4C41926_1, ATCEA4S35224, ATCEA4S30816	97, 89, 87	ATL8C29981:976..2283	0.76					
147594	ATU009534	ATL8C29725:52..728	gap2	ATCEA4S752, ATCEA4S2318	97, 89	ATL8C29725:379..694	0.76					
147595	ATU009535	ATL8C10609:1915..909	gap2	ATCEA4C40859_1	97	ATL8C10609:1915..909	0.75					
147596	ATU009536	ATL8C17067:85..1716	gap2	ATCEA4C13499_1	97	ATL8C17067:114..1716	0.75					
147597	ATU009537	ATL8C13608:55..4174	gap2	ATCEA4S344, ATCEA4S178, ATCEA4S253	97, 91, 87	ATL8C13608:4174..55	0.75					
147598	ATU009538	ATL8C1177:937..574	gap2	ATCEA4C23205_1	97	ATL8C1177:937..818	0.75					
147599	ATU009539	ATL8C24158:1140..78	gap2	ATCEA4C117884_1, ATCEA4C31889_1	97, 94	ATL8C24158:1140..86	0.75					
147600	ATU009540	ATL8C7921:211..131	gap2	ATCEA4S6479	97	ATL8C7921:284..131	0.75					

		6				6						
147601	ATU009541	ATL8S26945:564..1	gap2	ATCEA4C20658_1	97	ATL8S26945:338..22	0.75					
147602	ATU009542	ATL8C21262:763..4151	gap2	ATCEA4C34126_2, ATCEA4C9235_2, ATCEA4C22599_1, ATCEA4C8149_1, ATCEA4C8149_2, ATCEA4S29601	97, 97, 97, 95, 92, 88	ATL8C21262:883..3904	0.75					
147603	ATU009543	ATL8C29378:402..858	gap2	ATCEA4S737	97	ATL8C29378:420..732	0.75					
147604	ATU009544	ATL8C25795:1906..1091	gap2	ATCEA4C25774_1	97	ATL8C25795:1906..1417	0.75					
147605	ATU009545	ATL8C1859:1575..793	gap2	ATCEA4C16001_1, ATCEA4S27355	97, 88	ATL8C1859:1257..941	0.75					
147606	ATU009546	ATL8C31574:1226..353	gap2	ATCEA4S7015	97	ATL8C31574:1226..408	0.75					
147607	ATU009547	ATL8C20309:35..619	gap2	ATCEA4S23865	97	ATL8C20309:105..219	0.75					
147608	ATU009548	ATL8C17473:1	gap2	ATCEA4S7278	97	ATL8C17473:1	0.75					

		632..53				632..53						
147609	ATU009549	ATL8C32549:761..1	gap2	ATCEA4C5252_1, ATCEA4S6379, ATCEA4C13945_1, ATCEA4S3727	97, 92, 89, 86	ATL8C32549:698..59	0.75					
147610	ATU009550	ATL8C40082:320..998	gap2	ATCEA4C5397_1	97	ATL8C40082:422..742	0.75					
147611	ATU009551	ATL8C20643:1274..1	gap2	ATCEA4S29591	97	ATL8C20643:1274..183	0.75					
147612	ATU009552	ATL8C49347:867..1	gap2	ATCEA4C24837_1	97	ATL8C49347:850..78	0.75					
147613	ATU009553	ATL8C34472:1065..1	gap2	ATCEA4C111806_1, ATCEA4C54004_1, ATCEA4S33119	97, 95, 89	ATL8C34472:554..117	0.74					
147614	ATU009554	ATL8C34347:1..1322	gap2	ATCEA4S32599, ATCEA4C905_1	97, 96	ATL8C34347:179..646	0.74					
147615	ATU009555	ATL8C24106:1746..492	gap2	ATCEA4S2156	97	ATL8C24106:1746..492	0.74					
147616	ATU009556	ATL8C31146:3942..1727	gap2	ATCEA4S33186, ATCEA4	97, 96	ATL8C31146:3942..2013	0.74					

				C56236_1								
147617	ATU009557	ATL8C28321:1..916	gap2	ATCEA4C10318_1, ATCEA4S15749	97, 90	ATL8C28321:77..357, ATL8C28321:502..916	0.74, 0.64					
147618	ATU009558	ATL8C9220:2317..3964	gap2	ATCEA4C9406_3, ATCEA4S1617	97, 82	ATL8C9220:2445..3964	0.74					
147619	ATU009559	ATL8C5997:802..446	gap2	ATCEA4S4233	97	ATL8C5997:802..446	0.74					
147620	ATU009560	ATL8C35013:2261..214	gap2	ATCEA4C117632_1	97	ATL8C35013:2261..243	0.74					
147621	ATU009561	ATL8C48489:1745..227	gap2	ATCEA4S13230	97	ATL8C48489:1595..227	0.74					
147622	ATU009562	ATL8C42230:158..798	gap2	ATCEA4S28991	97	ATL8C42230:158..720	0.74					
147623	ATU009563	ATL8C20939:652..113	gap2	ATCEA4S8960	97	ATL8C20939:643..265	0.74					
147624	ATU009564	ATL8C29349:833..18	gap2	ATCEA4C301691	97	ATL8C29349:678..18	0.74					
147625	ATU009565	ATL8C1562:342..2088	gap2	ATCEA4C5550_1, ATCEA4S34262	96, 95	ATL8C1562:342..1815	0.74	g4539302	100	878	1.6e-83	(AL049480) putative protein [Arabi

												dopsis thaliana]
147626	ATU009566	ATL8C4 4984:1534..56	gap2	ATCEA4C34350_1	97	ATL8C4 4984:1446..56	0.74					
147627	ATU009567	ATL8C3 8341:867..44	gap2	ATCEA4C4167_1	97	ATL8C3 8341:763..44	0.74					
147628	ATU009568	ATL8S1 7987:104..552	gap2	ATCEA4S4601	97	ATL8S1 7987:108..552	0.73					
147629	ATU009569	ATL8C1 7866:279..1273	gap2	ATCEA4C38840_1	97	ATL8C1 7866:279..1273	0.73					
147630	ATU009570	ATL8C3 2598:98..610	gap2	ATCEA4S36372, ATCEA4C742_1	97, 86	ATL8C3 2598:100..533	0.73					
147631	ATU009571	ATL8C9 33:148..826	gap2	ATCEA4S13811	97	ATL8C9 33:148..826	0.73					
147632	ATU009572	ATL8C1 30:1..1499	gap2	ATCEA4S28866, ATCEA4C1808_1, ATCEA4S35362	97, 96, 86	ATL8C1 30:339..1449	0.73					
147633	ATU009573	ATL8C4 9421:1..1251	gap2	ATCEA4S883, ATCEA4C18764_1, ATCEA4S7942, ATCEA4S31687,	97, 96, 89, 85, 83	ATL8C4 9421:4..909	0.73					

				ATCEA4C62799_1								
147634	ATU009574	ATL8C38445:669..1	gap2	ATCEA4C96069_1	97	ATL8C38445:669..18	0.73					
147635	ATU009575	ATL8C27878:668..4	gap2	ATCEA4C6129_1	97	ATL8C27878:492..14	0.73					
147636	ATU009576	ATL8C31281:2976..1606	gap2	ATCEA4C46207_1, ATCEA4S33731, ATCEA4S6059	97, 90, 83	ATL8C31281:2976..1606	0.73					
147637	ATU009577	ATL8S3239:205..102	gap2	ATCEA4C1651_1	97	ATL8S3239:202..102	0.73					
147638	ATU009578	ATL8C4847:443..2153	gap2	ATCEA4S3250, ATCEA4S13686	97, 84	ATL8C4847:443..1701	0.73					
147639	ATU009579	ATL8C20316:1..2624	gap2	ATCEA4C28744_1, ATCEA4C120311_1	96, 95	ATL8C20316:6..2622	0.73	g4678926	100	468	1.1e-38	(AL049711) hypothetical protein [Arabidopsis thaliana]
147640	ATU009580	ATL8C12067:100..800	gap2	ATCEA4C44045_1	97	ATL8C12067:175..799	0.73					
147641	ATU009581	ATL8C3646:575..1	gap2	ATCEA4S30714, ATCEA4C38177_1	97, 95	ATL8C3646:550..140	0.73					

147642	ATU0095 82	ATL8C48902:742..68	gap2	ATCEA4S27096	97	ATL8C48902:616..329	0.73					
147643	ATU0095 83	ATL8C21689:463..2240	gap2	ATCEA4S2972, ATCEA4S21231	97, 91	ATL8C21689:617..1985	0.73					
147644	ATU0095 84	ATL8C10182:1543..1	gap2	ATCEA4S963, ATCEA4C26178_1	97, 96	ATL8C10182:1511..323	0.73					
147645	ATU0095 85	ATL8S18136:181..468	gap2	ATCEA4C107438_1	97	ATL8S18136:420..352	0.73					
147646	ATU0095 86	ATL8C19138:285..1	gap2	ATCEA4C132608_1	97	ATL8C19138:285..75	0.72					
147647	ATU0095 87	ATL8C25516:541..83	gap2	ATCEA4C7791_2	97	ATL8C25516:335..87	0.72					
147648	ATU0095 88	ATL8C23594:598..1	gap2	ATCEA4C9188_1, ATCEA4S12741	97, 96	ATL8C23594:598..160	0.72					
147649	ATU0095 89	ATL8C18451:70..814	gap2	ATCEA4S2290	97	ATL8C18451:70..785	0.72					
147650	ATU0095 90	ATL8C27599:1..670	gap2	ATCEA4C21147_1	97	ATL8C27599:371..634	0.72					
147651	ATU0095 91	ATL8S9751:85..494	gap2	ATCEA4S7612	97	ATL8S9751:85..374	0.72					
147652	ATU0095 92	ATL8C42550:473..1449	gap2	ATCEA4C8422_1	97	ATL8C42550:730..1397	0.72					
147653	ATU0095 93	ATL8C1543:78	gap2	ATCEA4S16972	97, 97, 90	ATL8C1543:77	0.72					

		3..1		, ATCEA4 C1782_ 1, ATCEA4 S5892		3..19						
147654	ATU009 594	ATL8C5 841:85 1..169 3	gap2	ATCEA4 S1898, ATCEA4 S15914	97, 92	ATL8C5 841:85 1..169 3	0.72					
147655	ATU009 595	ATL8C1 1262:5 9..146 8	gap2	ATCEA4 S5513	96	ATL8C1 1262:5 9..116 9	0.72	g19463 72	100	449	1.1e-41	(U9321 5) yeast hypoth etical protei n YDB1_S CHPO isolog [Arabi dopsis thalia na]
147656	ATU009 596	ATL8C3 1030:1 987..2 79	gap2	ATCEA4 C6783_ 1, ATCEA4 S2609, ATCEA4 S33424	96, 96, 90	ATL8C3 1030:1 748..4 57	0.72	g40975 85	100	844	2.9e-67	(U6492 5) NTGP4 [Nicot iana tabacu m]
147657	ATU009 597	ATL8S1 6288:1 ..422	gap2	ATCEA4 C48326 _1	97	ATL8S1 6288:9 0..422	0.72					
147658	ATU009 598	ATL8C9 790:72 ..1271	gap2	ATCEA4 C20869 _1	97	ATL8C9 790:72 ..670	0.71					
147659	ATU009 599	ATL8C5 846:31 05..11 8	gap2	ATCEA4 C33566 _1, ATCEA4 S16214	97, 92	ATL8C5 846:31 05..11 8	0.71					
147660	ATU009 600	ATL8C1 251:61	gap2	ATCEA4 C10686	97, 92	ATL8C1 251:61	0.71					

		27..4415		8_1, ATCEA4S10385		27..4599						
147661	ATU009601	ATL8C25923:49..865	gap2	ATCEA4C2381_1, ATCEA4C2381_2, ATCEA4S7699	97, 95, 94	ATL8C25923:49..638	0.71					
147662	ATU009602	ATL8C11236:1244..70	gap2	ATCEA4C33785_1, ATCEA4S31254	97, 89	ATL8C11236:1244..333	0.71					
147663	ATU009603	ATL8C32148:1453..31	gap2	ATCEA4S4827	97	ATL8C32148:1453..31	0.71					
147664	ATU009604	ATL8C33765:1..618	gap2	ATCEA4C50307_1	97	ATL8C33765:160..413	0.71					
147665	ATU009605	ATL8C18402:977..284	gap2	ATCEA4S15261	97	ATL8C18402:817..532	0.71					
147666	ATU009606	ATL8C33663:2854..1638	gap2	ATCEA4C11958_1, ATCEA4S33710	97, 88	ATL8C33663:2854..2006	0.71					
147667	ATU009607	ATL8C25050:1035..1438	gap2	ATCEA4S16164	97	ATL8C25050:1364..1144	0.71					
147668	ATU009608	ATL8C39315:302..896	gap2	ATCEA4S14667, ATCEA4S24584	97, 95	ATL8C39315:653..814	0.71					
147669	ATU009609	ATL8C47803:1	gap2	ATCEA4S5005	97	ATL8C47803:6	0.71					

		90..1140				28..1140						
147670	ATU0096610	ATL8C14587:510..38	gap2	ATCEA4S1998	97	ATL8C14587:352..38	0.71					
147671	ATU0096611	ATL8C34050:3389..138	gap2	ATCEA4S29717, ATCEA4C34983_4, ATCEA4C34983_1, ATCEA4S4662	97, 89, 88, 84	ATL8C34050:3353..138	0.71					
147672	ATU0096612	ATL8C43451:872..1	gap2	ATCEA4S32513, ATCEA4C1726_2, ATCEA4S32594, ATCEA4C1726_1	97, 95, 95, 87	ATL8C43451:768..392	0.71					
147673	ATU0096613	ATL8C49826:1834..2839	gap2	ATCEA4C64356_1	97	ATL8C49826:1834..2689	0.71					
147674	ATU0096614	ATL8C16093:1795..224	gap2	ATCEA4S34338, ATCEA4S333	97, 86	ATL8C16093:1770..452	0.71					
147675	ATU0096615	ATL8C31029:1..1020	gap2	ATCEA4C9480_1	97	ATL8C31029:243..913	0.71					
147676	ATU0096616	ATL8C35513:1..2092	gap2	ATCEA4C26498_1,	97, 93, 93	ATL8C35513:809..18	0.71					

				ATCEA4S7437, ATCEA4S14825		93						
147677	ATU009617	ATL8C6970:21..471	gap2	ATCEA4C74777_1	97	ATL8C6970:21..375	0.71					
147678	ATU009618	ATL8C35188:908..16	gap2	ATCEA4C70247_1	97	ATL8C35188:883..16	0.71					
147679	ATU009619	ATL8C26897:428..1148	gap2	ATCEA4C43614_1	97	ATL8C26897:439..1148	0.70					
147680	ATU009620	ATL8C5385:504..1850	gap2	ATCEA4S1702, ATCEA4S34357	97, 84	ATL8C5385:504..1769	0.70					
147681	ATU009621	ATL8C6705:1264..2316	gap2	ATCEA4S36308	97	ATL8C6705:1264..2134	0.70					
147682	ATU009622	ATL8C26252:2380..448	gap2	ATCEA4S6447	97	ATL8C26252:2370..448	0.70					
147683	ATU009623	ATL8C16870:533..1	gap2	ATCEA4S26473	97	ATL8C16870:479..118	0.70					
147684	ATU009624	ATL8C48751:31..1897	gap2	ATCEA4C33209_1, ATCEA4S5155, ATCEA4S5297	97, 87, 85	ATL8C48751:51..1897	0.70					
147685	ATU009625	ATL8C35735:6277..4582	gap2	ATCEA4C647_1, ATCEA4S24562	97, 91	ATL8C35735:6064..4770	0.70					
147686	ATU009626	ATL8C13807:1	gap2	ATCEA4C63568	97	ATL8C13807:2	0.70					

		..760		1		7..760						
147687	ATU009627	ATL8C50243:3458..1241	gap2	ATCEA4S26207, ATCEA4S26206	97, 91	ATL8C50243:2975..1690	0.70					
147688	ATU009628	ATL8C38106:2499..700	gap2	ATCEA4S11176, ATCEA4S30247	96, 83	ATL8C38106:2445..700	0.70	g4539421	100	1497	2.0e-134	(AL049171) putative protein [Arabidopsis thaliana]
147689	ATU009629	ATL8C48495:935..13	gap2	ATCEA4S6799	97	ATL8C48495:675..13	0.70					
147690	ATU009630	ATL8C34700:1284..300	gap2	ATCEA4S36343	97	ATL8C34700:1284..896	0.70					
147691	ATU009631	ATL8S7222:1..193	gap2	ATCEA4S14806, ATCEA4C1810_1	97, 86	ATL8S7222:48..151	0.70					
147692	ATU009632	ATL8C30056:743..952	gap2	ATCEA4C139232_1	97	ATL8C30056:828..933	0.70					
147693	ATU009633	ATL8C23665:162..2369	gap2	ATCEA4S488	97	ATL8C23665:162..2323	0.70					
147694	ATU009634	ATL8C24786:133..758	gap2	ATCEA4S22353	97	ATL8C24786:133..567	0.70					
147695	ATU009635	ATL8C1553:62..1491	gap2	ATCEA4C83_3, ATCEA4	97, 97, 84	ATL8C1553:115..146	0.70					

				S4313, ATCEA4 S11554		8						
147696	ATU009636	ATL8C29164:837..56	gap2	ATCEA4 C30106_1, ATCEA4 C30106_2	97, 96	ATL8C29164:767..56	0.70					
147697	ATU009637	ATL8C19627:187..574	gap2	ATCEA4 C9077_1, ATCEA4 S929	97, 96	ATL8C19627:529..432	0.70					
147698	ATU009638	ATL8C47751:1235..1857	gap2	ATCEA4 S1459	97	ATL8C47751:1235..1850	0.70					
147699	ATU009639	ATL8C1625:55..5818	gap2	ATCEA4 S178, ATCEA4 S253, ATCEA4 S126, ATCEA4 S3937	96, 89, 89, 85	ATL8C1625:55..5730	0.70	g4038066, g4773910, g4038062	100, 36, 33	735, 180, 1265	5.8e-63, 1.9e-18, 1.6e-128	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]; (AC005897) putative transposon

												MuDR [Arabidopsis thaliana]
147700	ATU009640	ATL8C31627:793..2056	gap2	ATCEA4S30316	97	ATL8C31627:793..2056	0.70					
147701	ATU009641	ATL8C27413:14..677	gap2	ATCEA4C5679_1	97	ATL8C27413:14..517	0.70					
147702	ATU009642	ATL8S8996:158..455	gap2	ATCEA4S29548	97	ATL8S8996:158..254	0.69					
147703	ATU009643	ATL8S17954:63..511	gap2	ATCEA4C39396_1	97	ATL8S17954:63..511	0.69					
147704	ATU009644	ATL8C15913:2227..4187	gap2	ATCEA4S29611	97	ATL8C15913:2227..4187	0.69					
147705	ATU009645	ATL8C27027:1796..88	gap2	ATCEA4S2659	97	ATL8C27027:1780..88	0.69					
147706	ATU009646	ATL8C47375:395..1	gap2	ATCEA4S9741, ATCEA4C59665_1	97, 89	ATL8C47375:210..55	0.69					
147707	ATU009647	ATL8C44106:430..1163	gap2	ATCEA4C27559_1	97	ATL8C44106:832..1163	0.69					
147708	ATU009648	ATL8C36316:1141..119	gap2	ATCEA4C95663_1	97	ATL8C36316:1141..533	0.69					
147709	ATU009649	ATL8S24823:28..571	gap2	ATCEA4S84, ATCEA4S29606	97, 96	ATL8S24823:103..421	0.69					
147710	ATU009	ATL8C2	gap2	ATCEA4	97	ATL8C2	0.69					

	650	0698:182..2177		C80096_1		0698:182..1910						
147711	ATU009651	ATL8C24285:1365..43	gap2	ATCEA4S10941, ATCEA4C18425_1	97, 96	ATL8C24285:1355..43	0.69					
147712	ATU009652	ATL8C5900:1..415	gap2	ATCEA4S1193	97	ATL8C5900:308..405	0.69					
147713	ATU009653	ATL8C13239:3492..3009	gap2	ATCEA4S12775	97	ATL8C13239:3245..3009	0.69					
147714	ATU009654	ATL8C16658:1..2414	gap2	ATCEA4C32022_1, ATCEA4S14562	97, 97	ATL8C16658:55..1778	0.69					
147715	ATU009655	ATL8C18191:366..795	gap2	ATCEA4S13288, ATCEA4S34412, ATCEA4C10302_1, ATCEA4C54782_1, ATCEA4S24697	97, 91, 90, 87, 87	ATL8C18191:571..722	0.69					
147716	ATU009656	ATL8C17894:1117..162	gap2	ATCEA4S7979	97	ATL8C17894:1109..162	0.69					
147717	ATU009657	ATL8C5784:1097..80	gap2	ATCEA4S8189	97	ATL8C5784:1097..80	0.69					
147718	ATU009658	ATL8C47295:9	gap2	ATCEA4C815_1	97, 94, 93	ATL8C47295:1	0.69					

		21..2994		, ATCEA4S15658, ATCEA4C815_3		052..2856						
147719	ATU009659	ATL8C32470:1489..1	gap2	ATCEA4S33, ATCEA4S30263	97, 88	ATL8C32470:1402..349	0.69					
147720	ATU009660	ATL8C23092:759..1	gap2	ATCEA4C21174_1	97	ATL8C23092:759..221	0.69					
147721	ATU009661	ATL8C13299:1853..332	gap2	ATCEA4C8444_1, ATCEA4S30599	97, 96	ATL8C13299:1831..332	0.69					
147722	ATU009662	ATL8S22790:598..1	gap2	ATCEA4C238_1	97	ATL8S22790:457..35	0.68					
147723	ATU009663	ATL8C2825:174..433	gap2	ATCEA4C102828_1, ATCEA4C102828_2	97, 96	ATL8C2825:189..422	0.68					
147724	ATU009664	ATL8C37846:56..1855	gap2	ATCEA4S29999, ATCEA4S30000	97, 97	ATL8C37846:56..1700	0.68					
147725	ATU009665	ATL8C2892:1235..250	gap2	ATCEA4C33647_1	97	ATL8C2892:1235..492	0.68					
147726	ATU009666	ATL8C29936:2945..529	gap2	ATCEA4S549, ATCEA4S6840, ATCEA4C63088_1,	97, 96, 95, 94, 87	ATL8C29936:2945..663	0.68					

				ATCEA4S8422, ATCEA4S8408								
147727	ATU009667	ATL8G28257:990..258	gap2	ATCEA4C46673_1, ATCEA4S33314, ATCEA4C527_1	97, 94, 90	ATL8C28257:473..258	0.68					
147728	ATU009668	ATL8C36753:1600..388	gap2	ATCEA4C31076_1	97	ATL8C36753:1598..388	0.68					
147729	ATU009669	ATL8C24808:40..645	gap2	ATCEA4C113538_1	97	ATL8C24808:119..517	0.68					
147730	ATU009670	ATL8C4105:2005..326	gap2	ATCEA4C6737_1, ATCEA4C3151_1, ATCEA4S12232	97, 97, 91	ATL8C4105:1798..331	0.68					
147731	ATU009671	ATL8S5356:1..554	gap2	ATCEA4C1983_1, ATCEA4S31663	97, 94	ATL8S5356:317..399	0.68					
147732	ATU009672	ATL8C19248:37..615	gap2	ATCEA4C4113_1	97	ATL8C19248:210..615	0.67					
147733	ATU009673	ATL8C709:1473..69	gap2	ATCEA4C37514_1	97	ATL8C709:1473..69	0.67					
147734	ATU009674	ATL8C35841:4001..2585	gap2	ATCEA4S1346	96	ATL8C35841:3977..2585	0.67	g4455209	100	998	6.1e-97	(AL035440) putative

												Proline synthetase associated protein [Arabidopsis thaliana]
147735	ATU009675	ATL8C36522:4267..3751	gap2	ATCEA4S27250	97	ATL8C36522:4262..3870	0.67					
147736	ATU009676	ATL8C10984:257..1429	gap2	ATCEA4S5256, ATCEA4C3658_1	96, 85	ATL8C10984:399..1429	0.67	g3738335	100	1062	1.8e-66	(AC005170) unknown protein [Arabidopsis thaliana]
147737	ATU009677	ATL8C22889:1..12461	gap2	ATCEA4S178, ATCEA4S81, ATCEA4S253, ATCEA4S344	96, 90, 88, 83	ATL8C22889:93..1434, ATL8C22889:1734..12461	0.67, 0.44	g3047063, g4309767, g4038066, g4567296, g4567295	100, 100, 100, 100, 32	181, 4166, 749, 2379, 618	1.8e-90, 0.0, 7.1e-46, 1.0e-214, 1.3e-58	(AF058825) No definition line found [Arabidopsis thaliana]; (AC006217) putative Athila retroelement ORF1

												protein [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabidopsis thaliana]; (AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AC006918) putative pol polyprotein [Arabidopsis thaliana]
147738	ATU009678	ATL8C778:3545..4315	gap2	ATCEA4C25701_1	97	ATL8C778:3545..4315	0.67					
147739	ATU009	ATL8C3	gap2	ATCEA4	97	ATL8C3	0.67					

	679	0788:1619..4944		S12360		0788:1747..4944						
147740	ATU009680	ATL8C26447:1806..354	gap2	ATCEA4C2869_1	96	ATL8C26447:1755..354	0.67	g2194137	100	298	5.0e-30	(AC002062) ESTs gb|R29947,gb|H76702 come from this gene. [Arabidopsis thaliana]
147741	ATU009681	ATL8C11617:959..71	gap2	ATCEA4S6340	97	ATL8C11617:951..71	0.67					
147742	ATU009682	ATL8C47832:785..1	gap2	ATCEA4S7693	97	ATL8C47832:785..330	0.67					
147743	ATU009683	ATL8C3144:203..1943	gap2	ATCEA4C35424_1, ATCEA4S16330	96, 82	ATL8C3144:231..1943	0.66	g4105697	100	1068	7.8e-105	(AF049870) thaumatin-like protein [Arabidopsis thaliana]
147744	ATU009684	ATL8C31141:605..46	gap2	ATCEA4S2277	97	ATL8C31141:427..55	0.66					
147745	ATU009685	ATL8C14358:505..824	gap2	ATCEA4C33172_1	97	ATL8C14358:558..644	0.66					
147746	ATU009686	ATL8C24930:1	gap2	ATCEA4C64603	97, 84	ATL8C24930:7	0.66					

		..1615		_1, ATCEA4 S29898		1..161 5						
147747	ATU009 687	ATL8S1 2469:1 ..604	gap2	ATCEA4 C461_1	97	ATL8S1 2469:3 4..130	0.66					
147748	ATU009 688	ATL8C2 0201:1 3..139 0	gap2	ATCEA4 S787, ATCEA4 S14950	97, 87	ATL8C2 0201:1 3..136 3	0.66					
147749	ATU009 689	ATL8C4 7818:8 93..16	gap2	ATCEA4 C27073 _1	97	ATL8C4 7818:8 35..20 7	0.66					
147750	ATU009 690	ATL8C2 7771:2 95..13 92	gap2	ATCEA4 C11107 _1	97	ATL8C2 7771:4 56..86 7	0.66					
147751	ATU009 691	ATL8S1 6403:4 10..70	gap2	ATCEA4 C14167 _1	97	ATL8S1 6403:2 19..70	0.66					
147752	ATU009 692	ATL8C2 5779:3 90..18 91	gap2	ATCEA4 S29893 , ATCEA4 S29973	97, 97	ATL8C2 5779:3 90..17 09	0.66					
147753	ATU009 693	ATL8C1 5833:8 05..1	gap2	ATCEA4 C11273 _4, ATCEA4 C11273 _3	97, 94	ATL8C1 5833:3 87..10 2	0.66					
147754	ATU009 694	ATL8C8 267:13 ..1216	gap2	ATCEA4 S14231	97	ATL8C8 267:13 ..849	0.66					
147755	ATU009 695	ATL8C1 7995:1 20..25 98	gap2	ATCEA4 S253	97	ATL8C1 7995:1 20..23 86	0.66					
147756	ATU009 696	ATL8C3 2766:1 11..15 03	gap2	ATCEA4 S3475	97	ATL8C3 2766:1 11..15 03	0.66					
147757	ATU009	ATL8C1	gap2	ATCEA4	97,	ATL8C1	0.65					

	697	0971:4270..575		S6849, ATCEA4C38496_1, ATCEA4S2704	97, 91	0971:4270..575						
147758	ATU009698	ATL8C3717:1..1151	gap2	ATCEA4C34668_1	97	ATL8C3717:143..1151	0.65					
147759	ATU009699	ATL8C11064:1..1720	gap2	ATCEA4C23292_1, ATCEA4S35239, ATCEA4C30984_1	97, 95, 94	ATL8C11064:112..1683	0.65					
147760	ATU009700	ATL8C37088:19..908	gap2	ATCEA4S399	97	ATL8C37088:658..908	0.65					
147761	ATU009701	ATL8C22591:211..1	gap2	ATCEA4C14686_1	97	ATL8C22591:208..79	0.65					
147762	ATU009702	ATL8C14791:774..1873	gap2	ATCEA4C41305_1	97	ATL8C14791:1252..1796	0.65					
147763	ATU009703	ATL8C21088:715..1543	gap2	ATCEA4S2465	97	ATL8C21088:775..1509	0.65					
147764	ATU009704	ATL8C7167:1172..5934	gap2	ATCEA4S9436, ATCEA4S9399	97, 83	ATL8C7167:1185..5934	0.65					
147765	ATU009705	ATL8C21460:485..181	gap2	ATCEA4S2583	97	ATL8C21460:271..181	0.65					
147766	ATU009706	ATL8C27467:2	gap2	ATCEA4S30519	97, 86	ATL8C27467:8	0.65					

		24..872		, ATCEA4S1445		63..333						
147767	ATU009707	ATL8S8149:304..1	gap2	ATCEA4C24020_1	97	ATL8S8149:106..55	0.65					
147768	ATU009708	ATL8C44470:1..1047	gap2	ATCEA4S34970, ATCEA4S7024, ATCEA4C84766_1	97, 96, 94	ATL8C44470:14..840	0.65					
147769	ATU009709	ATL8C4470:3630..4	gap2	ATCEA4C38823_1, ATCEA4C33294_1	97, 91	ATL8C4470:3605..4	0.65					
147770	ATU009710	ATL8C23700:529..1	gap2	ATCEA4C15341_1	97	ATL8C23700:477..352	0.65					
147771	ATU009711	ATL8C24500:546..691	gap2	ATCEA4S35453	97	ATL8C24500:546..690	0.65					
147772	ATU009712	ATL8C25457:1138..210	gap2	ATCEA4C112346_1	97	ATL8C25457:1138..369	0.65					
147773	ATU009713	ATL8C877:5729..2549	gap2	ATCEA4C52030_2, ATCEA4S27007, ATCEA4C34335_1, ATCEA4S17867	96, 95, 95, 84	ATL8C877:5729..2768	0.64	g2633544	100	315	0.80	(Z99110) yjcL [Bacillus subtilis]
147774	ATU009	ATL8S2	gap2	ATCEA4	97	ATL8S2	0.64					

	714	9980:556..173		C46566_1		9980:530..173						
147775	ATU009715	ATL8C16613:4147..121	gap2	ATCEA4S29937, ATCEA4S3166	97, 88	ATL8C16613:4147..307	0.64					
147776	ATU009716	ATL8C12268:1..382	gap2	ATCEA4C2128_1	97	ATL8C12268:159..371	0.64					
147777	ATU009717	ATL8C7659:6074..2510	gap2	ATCEA4S4133, ATCEA4C80480_1, ATCEA4C26352_1	96, 95, 89	ATL8C7659:5800..2638	0.64	g473949	100	290	7.9e-14	(D29958) KIAA0116 [Homo sapiens]
147778	ATU009718	ATL8C1674:749..1873	gap2	ATCEA4C117963_1, ATCEA4S35573, ATCEA4S27335	97, 89, 82	ATL8C1674:1873..749	0.64					
147779	ATU009719	ATL8C830:850..11	gap2	ATCEA4C871_1, ATCEA4S14629	97, 97	ATL8C830:783..258	0.64					
147780	ATU009720	ATL8C29000:1..1450	gap2	ATCEA4C4260_1, ATCEA4C40017_1, ATCEA4S29760	97, 95, 92	ATL8C29000:237..1187	0.64					
147781	ATU009721	ATL8C20152:328..1	gap2	ATCEA4S5234	97	ATL8C20152:189..8	0.64					

147782	ATU0097 22	ATL8C32720:1227..1	gap2	ATCEA4C75321_1, ATCEA4S23139, ATCEA4S23138, ATCEA4S23137	97, 90, 87, 86	ATL8C32720:1227..199	0.64					
147783	ATU0097 23	ATL8C48211:29..1922	gap2	ATCEA4C119185_1	96	ATL8C48211:373..1922	0.64	g2222674, g142832, g3080473	100, 99, 77	318, 68, 130	1.7e-28, 0.93, 5.2e-14	(Y13922) murG [Enterococcus hirae]; (M31827) ORF1 [Bacillus subtilis]; (AL022602) udp-n-acetylglucosamine--n-acetylmuramyl - (pentapeptide) pyrophosphoryl-undecaprenol n-

												acetyl glucos amine transf erase [Mycob acteri um leprae]
147784	ATU009 724	ATL8S2 7786:1 ..403	gap2	ATCEA4 C2186_ 1	97	ATL8S2 7786:1 32..40 3	0.64					
147785	ATU009 725	ATL8S3 871:14 8..664	gap2	ATCEA4 C15542 _1, ATCEA4 S30836	97, 94	ATL8S3 871:14 9..580	0.64					
147786	ATU009 726	ATL8S2 2216:1 ..444	gap2	ATCEA4 C18298 _1	97	ATL8S2 2216:3 06..44 4	0.63					
147787	ATU009 727	ATL8C3 0543:6 31..1	gap2	ATCEA4 C15860 _1, ATCEA4 S5456, ATCEA4 S5448	97, 88, 83	ATL8C3 0543:6 04..11	0.63					
147788	ATU009 728	ATL8S3 735:57 9..1	gap2	ATCEA4 C591_2 , ATCEA4 S26493	97, 92	ATL8S3 735:37 9..158	0.63					
147789	ATU009 729	ATL8C3 6429:1 ..492	gap2	ATCEA4 C7231_ 1	97	ATL8C3 6429:5 7..492	0.63					
147790	ATU009 730	ATL8C4 2875:2 58..27 62	gap2	ATCEA4 C1524_ 1	97	ATL8C4 2875:7 69..27 62	0.63					
147791	ATU009 731	ATL8C3 8917:8	gap2	ATCEA4 S5205	97	ATL8C3 8917:6	0.63					

		27..291				31..291						
147792	ATU0097 32	ATL8C12740:1520..511	gap2	ATCEA4S33351, ATCEA4S31011	97, 93	ATL8C12740:1489..814	0.63					
147793	ATU0097 33	ATL8C3:15..1798	gap2	ATCEA4S31539	97	ATL8C3:15..1798	0.63					
147794	ATU0097 34	ATL8C47083:2902..358	gap2	ATCEA4S831	97	ATL8C47083:2861..358	0.63					
147795	ATU0097 35	ATL8C49806:1852..1	gap2	ATCEA4C311_1	97	ATL8C49806:1735..26	0.62					
147796	ATU0097 36	ATL8C23180:794..118	gap2	ATCEA4C37442_1	97	ATL8C23180:505..118	0.62					
147797	ATU0097 37	ATL8C38276:177..558	gap2	ATCEA4C1980_1	97	ATL8C38276:506..185	0.62					
147798	ATU0097 38	ATL8C17964:226..700	gap2	ATCEA4C42752_1	97	ATL8C17964:226..518	0.62					
147799	ATU0097 39	ATL8C21990:98..2436	gap2	ATCEA4S35015, ATCEA4C99786_2, ATCEA4S32461, ATCEA4C99786_1	97, 95, 95, 93	ATL8C21990:98..2069	0.62					
147800	ATU0097 40	ATL8C4:5301.	gap2	ATCEA4C12952	97, 93	ATL8C4:5301.	0.62					

		.218		9_1, ATCEA4 S32860		.218						
147801	ATU009 741	ATL8C2 7712:1 8..127 8	gap2	ATCEA4 S14760 , ATCEA4 S28454	97, 94	ATL8C2 7712:1 90..11 43	0.62					
147802	ATU009 742	ATL8C3 7438:1 684..1 93	gap2	ATCEA4 C12888 _1, ATCEA4 S32549	96, 93	ATL8C3 7438:1 361..1 93	0.62	g45891 23	100	1807		(AF126 374) At14a protei n [Arabi dopsis thalia na]
147803	ATU009 743	ATL8C2 5765:7 29..1	gap2	ATCEA4 C1810_ 1	97	ATL8C2 5765:6 89..15 2	0.62					
147804	ATU009 744	ATL8C3 2563:3 391..6 5	gap2	ATCEA4 S8831, ATCEA4 S5472, ATCEA4 C80000 _1, ATCEA4 S31832 , ATCEA4 S12370 , ATCEA4 C6674_ 1	97, 95, 94, 91, 90, 89	ATL8C3 2563:3 308..6 5	0.62					
147805	ATU009 745	ATL8C4 9736:1 278..1	gap2	ATCEA4 C14938 _1	97	ATL8C4 9736:1 278..1 0	0.62					
147806	ATU009 746	ATL8C3 0874:2 96..52	gap2	ATCEA4 C34517 _1	97	ATL8C3 0874:3 33..52	0.61					

		4				4						
147807	ATU009747	ATL8C33255:2435..232	gap2	ATCEA4C7360_1, ATCEA4S2165, ATCEA4S15464	97, 97, 85	ATL8C33255:2435..232	0.61					
147808	ATU009748	ATL8C45352:71..1175	gap2	ATCEA4C130315_1	97	ATL8C45352:71..860	0.61					
147809	ATU009749	ATL8C4927:673..1	gap2	ATCEA4C2218_5, ATCEA4S33392, ATCEA4C2218_9, ATCEA4S32262	97, 92, 91, 88	ATL8C4927:552..25	0.61					
147810	ATU009750	ATL8C48373:2521..3185	gap2	ATCEA4C1956_1	97	ATL8C48373:2601..3036	0.61					
147811	ATU009751	ATL8C11838:1219..862	gap2	ATCEA4S26457	97	ATL8C11838:1205..1068	0.61					
147812	ATU009752	ATL8C18615:530..1940	gap2	ATCEA4S183, ATCEA4S32070	96, 89	ATL8C18615:530..1563	0.61	g3860250	100	1538	4.3e-157	(AC005824) putative chloroplast prephenate dehydratase [Arabidopsis thalia

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147813	ATU009753	ATL8C38289:638..1006	gap2	ATCEA4C10182_1	97	ATL8C38289:706..972	0.61					
147814	ATU009754	ATL8C48635:379..1	gap2	ATCEA4C12658_1	97	ATL8C48635:246..68	0.61					
147815	ATU009755	ATL8C24473:80..645	gap2	ATCEA4S36352	97	ATL8C24473:95..451	0.61					
147816	ATU009756	ATL8C19815:5387..579	gap2	ATCEA4S18670	96	ATL8C19815:5387..579	0.61	g3548802	100	653	1.9e-51	(AC005313) axi 1-like protein [Arabidopsis thaliana]
147817	ATU009757	ATL8C21837:1046..2212	gap2	ATCEA4C1455_1	97	ATL8C21837:1108..1995	0.61					
147818	ATU009758	ATL8C38065:3941..1203	gap2	ATCEA4S2832	97	ATL8C38065:3798..1203	0.60					
147819	ATU009759	ATL8C12455:737..83	gap2	ATCEA4S30325	97	ATL8C12455:734..83	0.60					
147820	ATU009760	ATL8C47225:1..721	gap2	ATCEA4S2761	97	ATL8C47225:221..721	0.60					
147821	ATU009761	ATL8C45623:151..1686	gap2	ATCEA4S1129	97	ATL8C45623:384..1686	0.60					
147822	ATU009762	ATL8C2400:1231..1	gap2	ATCEA4C71369_1, ATCEA4	97, 97	ATL8C2400:1132..12	0.60					

				C5381_1								
147823	ATU009763	ATL8S9687:435..582	gap2	ATCEA4C132591_1	97	ATL8S9687:435..562	0.60					
147824	ATU009764	ATL8C37602:1..353	gap2	ATCEA4C61587_1	97	ATL8C37602:120..353	0.60					
147825	ATU009765	ATL8C14729:382..1327	gap2	ATCEA4S13822	97	ATL8C14729:382..1327	0.60					
147826	ATU009766	ATL8C17231:312..1342	gap2	ATCEA4C5718_1	97	ATL8C17231:312..1298	0.59					
147827	ATU009767	ATL8C26539:602..2187	gap2	ATCEA4S12088, ATCEA4C28317_1, ATCEA4S10698, ATCEA4S19120, ATCEA4S26518, ATCEA4S26517	97, 97, 93, 91, 90, 87	ATL8C26539:626..1994	0.59					
147828	ATU009768	ATL8C35758:2914..1625	gap2	ATCEA4S5618, ATCEA4C8935_1	97, 89	ATL8C35758:2914..1625	0.59					
147829	ATU009769	ATL8C36550:1430..2532	gap2	ATCEA4C129_1, ATCEA4S31891	97, 97, 94, 88, 86	ATL8C36550:1526..2353	0.59					

				, ATCEA4 S29815 , ATCEA4 S8016, ATCEA4 S32473								
147830	ATU009 770	ATL8C1 4534:1 7019.. 9802	gap2	ATCEA4 S11934	96	ATL8C1 4534:1 3043.. 9802, ATL8C1 4534:1 5811.. 13150	0.59, 0.56	g47739 20, g44173 10	100, 100	2398, 1439	2.8e-227, 2.3e-110	(AF147 259) F10A2. 17 gene produc t [Arabi dopsis thalia na]; (AC006 446) putati ve Athila retroe lement ORF1 protei n [Arabi dopsis thalia na]
147831	ATU009 771	ATL8C1 6058:4 93..12 12	gap2	ATCEA4 C76_2, ATCEA4 C76_1	97, 96	ATL8C1 6058:8 94..11 37	0.59					
147832	ATU009 772	ATL8C1 1489:5 75..23 9	gap2	ATCEA4 S7827	97	ATL8C1 1489:4 96..23 9	0.59					
147833	ATU009 773	ATL8C2 5069:9 92..11 7	gap2	ATCEA4 S992	97	ATL8C2 5069:9 92..11 7	0.59					

147834	ATU009774	ATL8C40953:581..852	gap2	ATCEA4C52573_1	97	ATL8C40953:848..780	0.59					
147835	ATU009775	ATL8C13036:2720..518	gap2	ATCEA4C12386_1, ATCEA4S23293, ATCEA4S9439	97, 95, 84	ATL8C13036:2543..518	0.59					
147836	ATU009776	ATL8C50006:1070..1551	gap2	ATCEA4C30182_1	97	ATL8C50006:1090..1505	0.59					
147837	ATU009777	ATL8C25224:57..1604	gap2	ATCEA4C9835_1	97	ATL8C25224:146..1604	0.59					
147838	ATU009778	ATL8C49702:2018..6032	gap2	ATCEA4C2596_1, ATCEA4S11735, ATCEA4S14546, ATCEA4S36002, ATCEA4S11948, ATCEA4C2596_2	96, 94, 90, 87, 86, 83	ATL8C49702:5942..2023	0.59	g2760839, g3135751	100, 33	1387, 200	4.8e-129, 7.7e-17	(AC003105) putative receptor kinase [Arabidopsis thaliana]; (AJ006095) 26S protease regulatory subunit 6 [Cicer arietinum]
147839	ATU009	ATL8C3	gap2	ATCEA4	97	ATL8C3	0.59					

	779	5132:3 90..1		C749_1		5132:2 17..36						
147840	ATU009 780	ATL8C3 8638:1 116..3 59	gap2	ATCEA4 C18858 _1	97	ATL8C3 8638:4 97..35 9	0.58					
147841	ATU009 781	ATL8C4 4095:1 748..2 352	gap2	ATCEA4 C20599 _1	97	ATL8C4 4095:1 779..2 301	0.58					
147842	ATU009 782	ATL8C2 8337:2 14..99 6	gap2	ATCEA4 C10242 _3, ATCEA4 S11402 , ATCEA4 S33583	97, 97, 95	ATL8C2 8337:9 16..45 5	0.58					
147843	ATU009 783	ATL8S9 702:10 9..603	gap2	ATCEA4 C11170 _1	97	ATL8S9 702:10 9..393	0.58					
147844	ATU009 784	ATL8S1 9877:1 ..398	gap2	ATCEA4 C34042 _1	97	ATL8S1 9877:1 17..39 8	0.58					
147845	ATU009 785	ATL8C5 612:13 36..23 3	gap2	ATCEA4 C6978_ 1, ATCEA4 S23659	97, 84	ATL8C5 612:13 27..23 3	0.58					
147846	ATU009 786	ATL8C1 8000:5 7..438	gap2	ATCEA4 C1569_ 1	97	ATL8C1 8000:5 7..311	0.58					
147847	ATU009 787	ATL8C3 8298:1 26..35 3	gap2	ATCEA4 C5542_ 1	97	ATL8C3 8298:1 26..27 3	0.58					
147848	ATU009 788	ATL8C3 3490:1 83..11 89	gap2	ATCEA4 C19491 _1, ATCEA4 S27119	97, 85	ATL8C3 3490:2 17..11 89	0.58					
147849	ATU009 789	ATL8C4 7160:3	gap2	ATCEA4 S2460	97	ATL8C4 7160:3	0.58					

		221..541				219..541						
147850	ATU0097 90	ATL8C4 430:331..911	gap2	ATCEA4C30183_2, ATCEA4S28566, ATCEA4S28962	97, 95, 88	ATL8C4 430:554..911	0.58					
147851	ATU0097 91	ATL8C4 4728:305..76	gap2	ATCEA4C31942_1	97	ATL8C4 4728:292..76	0.58					
147852	ATU0097 92	ATL8C4 6878:925..1	gap2	ATCEA4C1859_1	97	ATL8C4 6878:752..505	0.57					
147853	ATU0097 93	ATL8C2 8383:1..946	gap2	ATCEA4S36354	97	ATL8C2 8383:503..708	0.57					
147854	ATU0097 94	ATL8C2 9018:92..1474	gap2	ATCEA4S4399, ATCEA4C12502_1, ATCEA4S14047	97, 96, 89	ATL8C2 9018:924..1258	0.57					
147855	ATU0097 95	ATL8C3 4659:863..593	gap2	ATCEA4S29501	97	ATL8C3 4659:849..774	0.57					
147856	ATU0097 96	ATL8C1 4261:813..1103	gap2	ATCEA4C20369_1	97	ATL8C1 4261:989..1103	0.57					
147857	ATU0097 97	ATL8C1 2906:577..922	gap2	ATCEA4C27740_1	97	ATL8C1 2906:696..896	0.57					
147858	ATU0097 98	ATL8C3 80:1442..2565	gap2	ATCEA4C14554_1, ATCEA4	97, 91	ATL8C3 80:1524..2565	0.57					

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147859	ATU009799	ATL8C25058:907..16	gap2	ATCEA4C46668_1	97	ATL8C25058:556..122	0.57					
147860	ATU009800	ATL8C24681:169..608	gap2	ATCEA4S3528	97	ATL8C24681:608..169	0.57					
147861	ATU009801	ATL8C12850:1678..2394	gap2	ATCEA4C33023_1, ATCEA4S26633	97, 87	ATL8C12850:1691..2195	0.57					
147862	ATU009802	ATL8C2920:1464..2070	gap2	ATCEA4S807	97	ATL8C2920:1478..2070	0.57					
147863	ATU009803	ATL8C3984:1..719	gap2	ATCEA4C18957_1	97	ATL8C3984:276..719	0.57					
147864	ATU009804	ATL8C38032:2245..795	gap2	ATCEA4S33027, ATCEA4S6430, ATCEA4S35601	97, 95, 87	ATL8C38032:2245..1325	0.57					
147865	ATU009805	ATL8C12868:1..797	gap2	ATCEA4S34821, ATCEA4C20864_1, ATCEA4C5952_1	97, 91, 88	ATL8C12868:344..643	0.57					
147866	ATU009806	ATL8C4493:3520..2106	gap2	ATCEA4C38140_1	97	ATL8C4493:3410..2106	0.57					
147867	ATU009807	ATL8C42615:3733..2	gap2	ATCEA4C32880_1,	97, 90	ATL8C42615:3673..2	0.57					

		28		ATCEA4C11790 2_1		98						
147868	ATU009808	ATL8C4 4104:7 62..1	gap2	ATCEA4S1345	97	ATL8C4 4104:7 62..10 2	0.56					
147869	ATU009809	ATL8C2 7756:1 219..1 047	gap2	ATCEA4C24899 _1	97	ATL8C2 7756:1 208..1 124	0.56					
147870	ATU009810	ATL8C7 391:17 15..24 73	gap2	ATCEA4C463_1 , ATCEA4S8823	97, 92	ATL8C7 391:19 36..22 68	0.56					
147871	ATU009811	ATL8C5 945:86 0..21	gap2	ATCEA4C38814 _1	97	ATL8C5 945:31 0..21	0.56					
147872	ATU009812	ATL8C2 6321:1 740..2 632	gap2	ATCEA4C54385 _1	97	ATL8C2 6321:1 771..2 632	0.56					
147873	ATU009813	ATL8C5 338:52 6..786	gap2	ATCEA4S29578	97	ATL8C5 338:52 6..704	0.56					
147874	ATU009814	ATL8C2 40:117 6..126	gap2	ATCEA4S1515, ATCEA4C24651 2	97, 84	ATL8C2 40:111 7..126	0.56					
147875	ATU009815	ATL8S9 64:552 ..64	gap2	ATCEA4S26789 , ATCEA4S19904	97, 87	ATL8S9 64:523 ..221	0.56					
147876	ATU009816	ATL8C2 1531:2 212..3 045	gap2	ATCEA4S7965	96	ATL8C2 1531:2 217..3 042	0.56	g1729980	100	575	2.7e-58	THAUMATIN-LIKE PROTEIN PRECURSOR [Arabi

												dopsis thaliana]
147877	ATU009817	ATL8C11289:1604..1203	gap2	ATCEA4S12150	97	ATL8C11289:1308..1203	0.56					
147878	ATU009818	ATL8S2321:607..47	gap2	ATCEA4C16473_1, ATCEA4S32929	97, 91	ATL8S2321:549..120	0.56					
147879	ATU009819	ATL8C6134:1..312	gap2	ATCEA4C13882_1, ATCEA4S7500	97, 92	ATL8C6134:56..312	0.55					
147880	ATU009820	ATL8C45870:1..819	gap2	ATCEA4S3600	97	ATL8C45870:353..819	0.55					
147881	ATU009821	ATL8C32580:1004..86	gap2	ATCEA4C18934_2, ATCEA4C18934_1	97, 88	ATL8C32580:807..86	0.55					
147882	ATU009822	ATL8S23436:68..413	gap2	ATCEA4C126342_1	97	ATL8S23436:68..413	0.55					
147883	ATU009823	ATL8C2391:1..485	gap2	ATCEA4S35735, ATCEA4C1714_1	97, 96	ATL8C2391:137..485	0.55					
147884	ATU009824	ATL8C6488:4393..573	gap2	ATCEA4C129179_1, ATCEA4C60246_1	97, 96	ATL8C6488:4393..942	0.55					
147885	ATU009825	ATL8S24259:4	gap2	ATCEA4C26534	97	ATL8S24259:4	0.55					

		46..1		_1		46..337						
147886	ATU009826	ATL8C17926:1550..1795	gap2	ATCEA4S35849, ATCEA4C67_1	97, 96	ATL8C17926:1627..1782	0.55					
147887	ATU009827	ATL8C13012:3895..611	gap2	ATCEA4S27113	96	ATL8C13012:3895..670	0.55	g2979551	100	1108	7.5e-96	(AC003680) putative receptor protein kinase [Arabidopsis thaliana]
147888	ATU009828	ATL8C28680:271..1547	gap2	ATCEA4S35018	97	ATL8C28680:271..1368	0.54					
147889	ATU009829	ATL8S23:1..431	gap2	ATCEA4C18536_1, ATCEA4S27464, ATCEA4S32796	97, 89, 86	ATL8S23:165..34	0.54					
147890	ATU009830	ATL8C35711:2781..574	gap2	ATCEA4C15018_1	97	ATL8C35711:2781..574	0.54					
147891	ATU009831	ATL8C19874:101..581	gap2	ATCEA4C57154_1	97	ATL8C19874:177..581	0.54					
147892	ATU009832	ATL8C21663:308..752	gap2	ATCEA4S17030	97	ATL8C21663:498..715	0.54					

147893	ATU0098 33	ATL8C33334:3251..64	gap2	ATCEA4C1005_1, ATCEA4C1489_1	97, 82	ATL8C33334:3251..405	0.54					
147894	ATU0098 34	ATL8C38208:94..374	gap2	ATCEA4C55916_1	97	ATL8C38208:159..374	0.53					
147895	ATU0098 35	ATL8C6835:76..901	gap2	ATCEA4C79397_1	97	ATL8C6835:76..666	0.53					
147896	ATU0098 36	ATL8S11044:39..505	gap2	ATCEA4S8290	97	ATL8S11044:73..505	0.53					
147897	ATU0098 37	ATL8C20952:779..1	gap2	ATCEA4C454_1, ATCEA4C454_3	97, 96	ATL8C20952:185..10	0.53					
147898	ATU0098 38	ATL8C7351:550..942	gap2	ATCEA4C49517_1	97	ATL8C7351:550..942	0.53					
147899	ATU0098 39	ATL8C27539:313..958	gap2	ATCEA4C69944_1	97	ATL8C27539:477..612	0.53					
147900	ATU0098 40	ATL8C45215:4264..2385	gap2	ATCEA4S26077, ATCEA4C1897_1	97, 84	ATL8C45215:3256..2741	0.53					
147901	ATU0098 41	ATL8C44859:1..686	gap2	ATCEA4C23333_1	97	ATL8C44859:60..512	0.53					
147902	ATU0098 42	ATL8C33264:518..2526	gap2	ATCEA4S2146	97	ATL8C33264:2526..518	0.52					
147903	ATU0098 43	ATL8C28768:11167..2	gap2	ATCEA4S21903,	97, 95, 89	ATL8C28768:514..28	0.52					

		36		ATCEA4C473_1, ATCEA4C473_2		7						
147904	ATU009844	ATL8C46512:3414..111	gap2	ATCEA4C76917_1, ATCEA4C76857_1, ATCEA4C11324_1, ATCEA4S34114	97, 97, 95, 86	ATL8C46512:3184..402	0.52					
147905	ATU009845	ATL8C41967:11108..3092	gap2	ATCEA4S81	96	ATL8C41967:10983..3658	0.52	g4567296, g4773920, g4038066, g4309768	100, 100, 37, 32	2093, 3070, 237, 339	4.8e-177, 8.7e-289, 1.3e-14, 6.0e-19	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AF147259) F10A2.17 gene product [Arabidopsis thaliana]; (AC005897) hypothetical

												protein [Arabidopsis thaliana]; (AC006217) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
147906	ATU009846	ATL8S26216:107..616	gap2	ATCEA4C69904_1	97	ATL8S26216:471..616	0.52					
147907	ATU009847	ATL8C6451:1..1676	gap2	ATCEA4S3856	97	ATL8C6451:933..1676	0.51					
147908	ATU009848	ATL8C10286:3699..7	gap2	ATCEA4C22019_1, ATCEA4C16654_1	97, 96	ATL8C10286:3566..7	0.51					
147909	ATU009849	ATL8C20748:665..3135	gap2	ATCEA4C118330_1, ATCEA4S28312	96, 93	ATL8C20748:665..2968	0.51	g4803960	100	1013	2.8e-88	(AC006202) putative carbonic anhydrase [Arabidopsis thalia

												na]
147910	ATU009850	ATL8C45211:1422..52	gap2	ATCEA4S5070, ATCEA4S13687	97, 96	ATL8C45211:1422..52	0.51					
147911	ATU009851	ATL8C5382:410..1	gap2	ATCEA4C2382_1	97	ATL8C5382:293..44	0.51					
147912	ATU009852	ATL8C27614:1870..2476	gap2	ATCEA4C29872_1	97	ATL8C27614:2060..2476	0.51					
147913	ATU009853	ATL8C3008:72..733	gap2	ATCEA4C14601_1	97	ATL8C3008:733..72	0.51					
147914	ATU009854	ATL8C33169:948..601	gap2	ATCEA4C2794_1	97	ATL8C33169:948..646	0.51					
147915	ATU009855	ATL8C4925:90..401	gap2	ATCEA4S36360	97	ATL8C4925:309..401	0.51					
147916	ATU009856	ATL8C17629:902..1	gap2	ATCEA4C8073_1, ATCEA4S2503, ATCEA4C24050_1, ATCEA4S7418	97, 90, 85, 83	ATL8C17629:748..64	0.51					
147917	ATU009857	ATL8C14240:1339..1	gap2	ATCEA4S13086, ATCEA4S14701	97, 90	ATL8C14240:1339..139	0.51					
147918	ATU009858	ATL8C44416:1151..194	gap2	ATCEA4S12526	97	ATL8C44416:1120..194	0.51					
147919	ATU009859	ATL8C46706:1..475	gap2	ATCEA4S23867,	97, 97, 97	ATL8C46706:428..56	0.51					

				ATCEA4C1951_2, ATCEA4C1951_1								
147920	ATU009860	ATL8C26527:1663..99	gap2	ATCEA4S29608, ATCEA4C27374_1	97, 95	ATL8C26527:1367..240	0.51					
147921	ATU009861	ATL8C3489:309..1	gap2	ATCEA4C27159_1, ATCEA4S27620	97, 83	ATL8C3489:306..260	0.50					
147922	ATU009862	ATL8C35705:1053..3313	gap2	ATCEA4C2238_1, ATCEA4C2238_2, ATCEA4C323_1, ATCEA4S8877	97, 92, 88, 84	ATL8C35705:1275..3098	0.50					
147923	ATU009863	ATL8C8013:169..2504	gap2	ATCEA4C82390_1, ATCEA4C17260_1, ATCEA4S10287	97, 97, 97	ATL8C8013:169..2421	0.50					
147924	ATU009864	ATL8S3259:1..442	gap2	ATCEA4C397_1	97	ATL8S3259:88..282	0.50					
147925	ATU009865	ATL8C48886:1046..1	gap2	ATCEA4C27596_1, ATCEA4C27596	97, 93, 87, 83	ATL8C48886:1046..58	0.50					

				_2, ATCEA4 S31782, ATCEA4 S21440								
147926	ATU009 866	ATL8C7 749:12 68..46 43	gap2	ATCEA4 S11155	97	ATL8C7 749:46 43..12 68	0.50					
147927	ATU009 867	ATL8C3 5973:1 1..106 4	gap2	ATCEA4 C98995 _1	97	ATL8C3 5973:1 1..487	0.50					
147928	ATU009 868	ATL8S2 341:11 3..604	gap2	ATCEA4 C539_1	97	ATL8S2 341:12 1..586	0.50					
147929	ATU009 869	ATL8C9 941:44 87..18 19	gap2	ATCEA4 C45407 _1, ATCEA4 S9884, ATCEA4 S32583, ATCEA4 S9866	96, 93, 92, 85	ATL8C9 941:42 50..18 19	0.49	g22621 05	100	2125	1.4e-221	(AC002 343) unknow n protei n [Arabi dopsis thalia na]
147930	ATU009 870	ATL8C3 6972:1 91..12 48	gap2	ATCEA4 C14569 _1	97	ATL8C3 6972:2 63..12 48	0.49					
147931	ATU009 871	ATL8C3 9299:5 52..29 1	gap2	ATCEA4 C36866 _1	97	ATL8C3 9299:4 55..29 1	0.49					
147932	ATU009 872	ATL8C1 4698:3 57..89 1	gap2	ATCEA4 C11670 3_1	97	ATL8C1 4698:6 57..89 1	0.49					
147933	ATU009 873	ATL8C2 7364:1 86..60 3	gap2	ATCEA4 S29546	97	ATL8C2 7364:1 86..49 6	0.49					
147934	ATU009	ATL8C2	gap2	ATCEA4	97, 88	ATL8C2	0.49					

	874	4121:1362..637		S8087, ATCEA4S35353		4121:637..1362						
147935	ATU009875	ATL8C35600:607..1	gap2	ATCEA4S1420, ATCEA4S1203	97, 97	ATL8C35600:591..19	0.49					
147936	ATU009876	ATL8S565:230..544	gap2	ATCEA4C6574_1, ATCEA4S16798	97, 85	ATL8S565:262..371	0.49					
147937	ATU009877	ATL8C22779:1233..1972	gap2	ATCEA4S3990	97	ATL8C22779:1972..1233	0.49					
147938	ATU009878	ATL8C57:1979..1089	gap2	ATCEA4C2061_1	97	ATL8C57:1979..1363	0.49					
147939	ATU009879	ATL8C37601:510..1453	gap2	ATCEA4C11403_1	97	ATL8C37601:544..1410	0.48					
147940	ATU009880	ATL8C9792:1617..1134	gap2	ATCEA4S20604, ATCEA4C98_1	97, 93	ATL8C9792:1535..1226	0.48					
147941	ATU009881	ATL8C37305:967..2199	gap2	ATCEA4C21400_1	97	ATL8C37305:987..2199	0.48					
147942	ATU009882	ATL8C39618:210..5412	gap2	ATCEA4S27399, ATCEA4S344, ATCEA4S178, ATCEA4S253	96, 93, 91, 86	ATL8C39618:210..5072	0.48	g4038066, g2129618, g4417309	100, 63, 42	707, 1947, 1657	6.9e-38, 2.0e-181, 1.8e-155	(AC005897) hypothetical protein [Arabidopsis thaliana]; hypothetical

												protein 1 - Arabidopsis thaliana retrotransposon Athila [Arabidopsis thaliana]; (AC006446) putative pol polyprotein with a reverse transcriptase domain [Arabidopsis thaliana]
147943	ATU009883	ATL8C11156:369..692	gap2	ATCEA4S228	97	ATL8C11156:490..600	0.48					
147944	ATU009884	ATL8C27641:675..1	gap2	ATCEA4S36242	97	ATL8C27641:622..1	0.48					
147945	ATU009885	ATL8C12734:302..2219	gap2	ATCEA4C103770_1, ATCEA4C3797_1	96, 95	ATL8C12734:362..2058	0.48	g4220485	100	1531	3.3e-154	(AC006069) putative beta-1,3-glucan

												ase [Arabidopsis thaliana]
147946	ATU0098886	ATL8S6444:1..475	gap2	ATCEA4C66335_1	97	ATL8S6444:158..475	0.48					
147947	ATU0098887	ATL8C16905:763..78	gap2	ATCEA4S12537	97	ATL8C16905:763..138	0.48					
147948	ATU0098888	ATL8S9121:151..597	gap2	ATCEA4S12580	97	ATL8S9121:155..232, ATL8S9121:549..442	0.48, 0.91					
147949	ATU0098889	ATL8C1233:4609..3309	gap2	ATCEA4S30093	97	ATL8C1233:4609..3524	0.48					
147950	ATU0098890	ATL8C11366:1293..2116	gap2	ATCEA4C487_1	97	ATL8C11366:2027..1522	0.48					
147951	ATU0098891	ATL8C31164:1..548	gap2	ATCEA4C732_3, ATCEA4S31585	97, 93	ATL8C31164:144..366	0.48					
147952	ATU0098892	ATL8C32279:1476..432	gap2	ATCEA4C1174_1	97	ATL8C32279:1412..637	0.48					
147953	ATU0098893	ATL8C44153:1746..1060	gap2	ATCEA4C92944_1	97	ATL8C44153:1746..1180	0.48					
147954	ATU0098894	ATL8C40013:626..172	gap2	ATCEA4C9563_1	97	ATL8C40013:521..172	0.47					

147955	ATU009895	ATL8C40335:757..84	gap2	ATCEA4C328861	97	ATL8C40335:757..84	0.47					
147956	ATU009896	ATL8C7306:1..669	gap2	ATCEA4S7658, ATCEA4C202981, ATCEA4C631451	97, 93, 85	ATL8C7306:89..583	0.47					
147957	ATU009897	ATL8C16181:650..1091	gap2	ATCEA4C307113, ATCEA4C307111	97, 87	ATL8C16181:650..1091	0.47					
147958	ATU009898	ATL8C13148:749..8	gap2	ATCEA4C120946_1	97	ATL8C13148:739..8	0.47					
147959	ATU009899	ATL8C38103:1..1660	gap2	ATCEA4S6994, ATCEA4C771901	97, 95	ATL8C38103:73..1649	0.47					
147960	ATU009900	ATL8C27627:52..2621	gap2	ATCEA4S29556	97	ATL8C27627:52..2520	0.47					
147961	ATU009901	ATL8C5589:605..153	gap2	ATCEA4S14293, ATCEA4C4264_1	97, 92	ATL8C5589:457..244	0.47					
147962	ATU009902	ATL8C46812:92..806	gap2	ATCEA4S26235, ATCEA4S33729, ATCEA4S31507	97, 90, 85	ATL8C46812:134..352	0.47					
147963	ATU009	ATL8C4	gap2	ATCEA4	97	ATL8C4	0.47					

	903	5873:639..172		C35469_1		5873:588..403						
147964	ATU009904	ATL8C15404:1388..1	gap2	ATCEA4C11113_1	97	ATL8C15404:1388..193	0.46					
147965	ATU009905	ATL8C20658:1187..3111	gap2	ATCEA4S11224	97	ATL8C20658:1187..3111	0.46					
147966	ATU009906	ATL8C20525:92..1773	gap2	ATCEA4C1828_1	97	ATL8C20525:726..1658	0.46					
147967	ATU009907	ATL8C22593:1035..561	gap2	ATCEA4C112307_1, ATCEA4S18805	97, 82	ATL8C22593:895..805	0.46					
147968	ATU009908	ATL8C687:61..914	gap2	ATCEA4S11977	97	ATL8C687:61..914	0.46					
147969	ATU009909	ATL8C46590:966..105	gap2	ATCEA4C31675_1	97	ATL8C46590:791..105	0.46					
147970	ATU009910	ATL8C2964:1090..627	gap2	ATCEA4S2212	97	ATL8C2964:1034..627	0.46					
147971	ATU009911	ATL8C16120:438..1	gap2	ATCEA4C54500_1	97	ATL8C16120:438..153	0.46					
147972	ATU009912	ATL8C19165:40..1600	gap2	ATCEA4C8356_2, ATCEA4C8356_1	97, 94	ATL8C19165:876..829	0.45					
147973	ATU009913	ATL8S20485:384..76	gap2	ATCEA4C16876_2	97	ATL8S20485:303..76	0.45					

147974	ATU009914	ATL8C44615:2553..313	gap2	ATCEA4C7809_1, ATCEA4S30868	97, 92	ATL8C44615:2499..313	0.45					
147975	ATU009915	ATL8C1746:1..3492	gap2	ATCEA4S178, ATCEA4S253	96, 88	ATL8C1746:1305..3492	0.45	g4038066, g4773920	100, 52	718, 1604	7.5e-24, 1.4e-159	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AF147259) F10A2.17 gene product [Arabidopsis thaliana]
147976	ATU009916	ATL8C40613:876..1	gap2	ATCEA4C802_1, ATCEA4S16245, ATCEA4S35791	97, 91, 88	ATL8C40613:641..66	0.45					
147977	ATU009917	ATL8C29302:3953..691	gap2	ATCEA4S13558, ATCEA4S17155	97, 90	ATL8C29302:3796..691	0.45					
147978	ATU009918	ATL8S7141:514..127	gap2	ATCEA4C686_2	97	ATL8S7141:462..127	0.45					
147979	ATU009919	ATL8C21885:4	gap2	ATCEA4S1739	97	ATL8C21885:4	0.45					

		80..272				56..274						
147980	ATU009920	ATL8S12685:1..434	gap2	ATCEA4C18363_1	97	ATL8S12685:196..434	0.45					
147981	ATU009921	ATL8C31555:515..1	gap2	ATCEA4S18515, ATCEA4S25463	97, 84	ATL8C31555:515..30	0.45					
147982	ATU009922	ATL8C11004:47..1143	gap2	ATCEA4C30614_1	97	ATL8C11004:47..976	0.44					
147983	ATU009923	ATL8C5567:1..408	gap2	ATCEA4S606	97	ATL8C5567:36..408	0.44					
147984	ATU009924	ATL8C8509:1132..328	gap2	ATCEA4C30939_1	97	ATL8C8509:1081..328	0.44					
147985	ATU009925	ATL8C11292:325..1157	gap2	ATCEA4S36023, ATCEA4C38578_1	97, 96	ATL8C11292:325..1157	0.44					
147986	ATU009926	ATL8C5126:56..597	gap2	ATCEA4C1977_1	97	ATL8C5126:421..119	0.44					
147987	ATU009927	ATL8C27669:1474..1	gap2	ATCEA4C151_1	97	ATL8C27669:1474..227	0.44					
147988	ATU009928	ATL8C17032:809..1	gap2	ATCEA4C82666_1	97	ATL8C17032:809..185	0.44					
147989	ATU009929	ATL8C39895:261..674	gap2	ATCEA4S8346	97	ATL8C39895:308..467	0.44					
147990	ATU009	ATL8C4	gap2	ATCEA4	97,	ATL8C4	0.43					

	930	6702:350..1		S1541, ATCEA4S3746, ATCEA4S595	96, 86	6702:137..72						
147991	ATU009931	ATL8C14585:798..1169	gap2	ATCEA4S12333	97	ATL8C14585:953..1095	0.43					
147992	ATU009932	ATL8C37345:1315..576	gap2	ATCEA4C2356_1	97	ATL8C37345:1090..692	0.43					
147993	ATU009933	ATL8C4867:1662..1	gap2	ATCEA4C2066_1	96	ATL8C4867:1473..21	0.42	g4128197	100	958	1.6e-75	(U75273) acyl-CoA binding protein [Arabidopsis thaliana]
147994	ATU009934	ATL8C36861:404..1626	gap2	ATCEA4S2141	97	ATL8C36861:404..1374	0.42					
147995	ATU009935	ATL8C44179:2340..43	gap2	ATCEA4C24647_2, ATCEA4C24647_1	97, 93	ATL8C44179:2291..43	0.42					
147996	ATU009936	ATL8S17455:1..485	gap2	ATCEA4C233_1	97	ATL8S17455:208..439	0.42					
147997	ATU009937	ATL8C19034:1..732	gap2	ATCEA4S10501	97	ATL8C19034:93..732	0.42					
147998	ATU009938	ATL8C42146:5	gap2	ATCEA4C8917_	97	ATL8C42146:7	0.42					

		23..872		1		35..857						
147999	ATU009939	ATL8C30496:2550..551	gap2	ATCEA4S34635, ATCEA4C23469_1, ATCEA4C54462_2	96, 87, 85	ATL8C30496:2264..551	0.41	g4455203	100	969	1.5e-60	(AL035440) putative protein [Arabidopsis thaliana]
148000	ATU009940	ATL8C33835:1725..1047	gap2	ATCEA4S27016, ATCEA4S36052	97, 89	ATL8C33835:1725..1047	0.41					
148001	ATU009941	ATL8S26048:386..1	gap2	ATCEA4C713_1	97	ATL8S26048:351..282	0.41					
148002	ATU009942	ATL8C32295:299..689	gap2	ATCEA4S13018	97	ATL8C32295:299..344	0.41					
148003	ATU009943	ATL8C1918:428..1	gap2	ATCEA4C17433_1	97	ATL8C1918:425..36	0.41					
148004	ATU009944	ATL8C45213:977..2312	gap2	ATCEA4C6288_1, ATCEA4C6288_2	97, 91	ATL8C45213:1115..2299	0.41					
148005	ATU009945	ATL8C38956:28..1783	gap2	ATCEA4C34957_1	97	ATL8C38956:28..1783	0.41					
148006	ATU009946	ATL8S509:371..1	gap2	ATCEA4C34983_1, ATCEA4S28073,	97, 82, 82	ATL8S509:195..96	0.41					

				ATCEA4S23501								
148007	ATU009947	ATL8C19171:668..158	gap2	ATCEA4C4216_1	97	ATL8C19171:390..158	0.41					
148008	ATU009948	ATL8S15341:524..1	gap2	ATCEA4C62213_1	97	ATL8S15341:524..345	0.41					
148009	ATU009949	ATL8C42223:1..627	gap2	ATCEA4C302_1	97	ATL8C42223:330..484	0.41					
148010	ATU009950	ATL8C47530:1027..96	gap2	ATCEA4S1168	96	ATL8C47530:935..174	0.40	g3892711	100	541	6.9e-54	(AL033545) putative protein [Arabidopsis thaliana]
148011	ATU009951	ATL8C40470:709..915	gap2	ATCEA4S6015	97	ATL8C40470:711..852	0.40					
148012	ATU009952	ATL8C34168:1097..2051	gap2	ATCEA4S9945	97	ATL8C34168:1097..2051	0.40					
148013	ATU009953	ATL8C47601:1573..691	gap2	ATCEA4S13167	97	ATL8C47601:1479..691	0.40					
148014	ATU009954	ATL8C13732:1062..720	gap2	ATCEA4C146245_1	97							
148015	ATU009955	ATL8C32795:6143..5893	gap2	ATCEA4S30491	97							

148016	ATU0099 56	ATL8C8 256:61 ..416	gap2	ATCEA4 S11373	97							
148017	ATU0099 57	ATL8C1 0898:1 540..1 720	gap2	ATCEA4 S23821	97							
148018	ATU0099 58	ATL8S1 5895:1 ..284	gap2	ATCEA4 S20314 , ATCEA4 C281_1	97, 85							
148019	ATU0099 59	ATL8C3 1569:3 56..11 31	gap2	ATCEA4 C12593 _1	97							
148020	ATU0099 60	ATL8C1 2711:5 26..98 5	gap2	ATCEA4 C20609 _1	97							
148021	ATU0099 61	ATL8C8 136:13 5..331	gap2	ATCEA4 S35480	97							
148022	ATU0099 62	ATL8C2 0801:1 080..1 316	gap2	ATCEA4 S26723	97							
148023	ATU0099 63	ATL8C2 2139:8 9..528	gap2	ATCEA4 S23856 , ATCEA4 S26454	97, 88							
148024	ATU0099 64	ATL8S1 7849:1 45..48 9	gap2	ATCEA4 C921_1	97							
148025	ATU0099 65	ATL8C3 2820:7 59..61 7	gap2	ATCEA4 C14229 7_1	97							
148026	ATU0099 66	ATL8C2 6470:6 38..15 4	gap2	ATCEA4 C7870_ 1	97							

148027	ATU0099 67	ATL8C8 053:11 74..90 8	gap2	ATCEA4 C30984 _1	97							
148028	ATU0099 68	ATL8C3 2830:1 094..6 44	gap2	ATCEA4 C99378 _1	97							
148029	ATU0099 69	ATL8C2 0845:1 105..1 778	gap2	ATCEA4 C81397 _1	97							
148030	ATU0099 70	ATL8C8 005:1. .163	gap2	ATCEA4 S32835	97							
148031	ATU0099 71	ATL8C2 0852:1 98..79	gap2	ATCEA4 S3113	97							
148032	ATU0099 72	ATL8C2 2114:2 75..66	gap2	ATCEA4 C20173 _1	97							
148033	ATU0099 73	ATL8C2 0866:2 274..2 563	gap2	ATCEA4 S26145	97							
148034	ATU0099 74	ATL8C2 0867:2 57..1	gap2	ATCEA4 S419	97							
148035	ATU0099 75	ATL8C2 0914:1 052..7 48	gap2	ATCEA4 C42426 _1	97							
148036	ATU0099 76	ATL8C2 8971:1 077..3 05	gap2	ATCEA4 C3137_ 2, ATCEA4 C3137_ 1	97, 94							
148037	ATU0099 77	ATL8C7 856:21 0..644	gap2	ATCEA4 C41993 _3	97							
148038	ATU0099 78	ATL8C7 85:1.. 333	gap2	ATCEA4 S34664 ,	97, 85							

				ATCEA4S30181								
148039	ATU009979	ATL8C784:384..729	gap2	ATCEA4C279_24	97							
148040	ATU009980	ATL8C20974:120..441	gap2	ATCEA4S15130	97							
148041	ATU009981	ATL8C780:3115..2830	gap2	ATCEA4C24123_1	97							
148042	ATU009982	ATL8C21117:1776..1155	gap2	ATCEA4C29617_1	97							
148043	ATU009983	ATL8C15512:3882..3238	gap2	ATCEA4C29171_1, ATCEA4S11216	97, 97							
148044	ATU009984	ATL8C11945:453..96	gap2	ATCEA4S33970, ATCEA4S33673, ATCEA4S6581, ATCEA4C1442_1, ATCEA4S6439, ATCEA4S27345, ATCEA4C1442_7	97, 96, 94, 94, 90, 90, 86							
148045	ATU009985	ATL8C11497:789..41	gap2	ATCEA4S30130	97							

		3										
148046	ATU009986	ATL8C21148:4374..4511	gap2	ATCEA4S253	97							
148047	ATU009987	ATL8C21216:3858..3998	gap2	ATCEA4C34546_1	97							
148048	ATU009988	ATL8C7654:370..150	gap2	ATCEA4S45	97							
148049	ATU009989	ATL8C7644:1..202	gap2	ATCEA4S36215	97							
148050	ATU009990	ATL8C35301:357..29	gap2	ATCEA4S29751	97							
148051	ATU009991	ATL8C49418:1243..1409	gap2	ATCEA4S2564	97							
148052	ATU009992	ATL8C49584:811..30	gap2	ATCEA4S34311,ATCEA4S31461	97, 83							
148053	ATU009993	ATL8S9262:161..1	gap2	ATCEA4C8946_1	97							
148054	ATU009994	ATL8C21549:492..82	gap2	ATCEA4S1388	97							
148055	ATU009995	ATL8C42150:395..101	gap2	ATCEA4C17829_1	97							
148056	ATU009996	ATL8C7513:31..407	gap2	ATCEA4S11175	97							
148057	ATU009997	ATL8C11935:1..117	gap2	ATCEA4C5667_2	97							
148058	ATU009	ATL8C7	gap2	ATCEA4	97							

	998	490:494..872		S2850								
148059	ATU009999	ATL8C41185:1..518	gap2	ATCEA4C490_1, ATCEA4S27656, ATCEA4S36037, ATCEA4S31096, ATCEA4S31065	97, 90, 88, 88, 85							
148060	ATU010000	ATL8C7471:1..107	gap2	ATCEA4S601	97							
148061	ATU010001	ATL8S10075:543..809	gap2	ATCEA4C32958_1	97							
148062	ATU010002	ATL8C6707:938..668	gap2	ATCEA4C21697_1	97							
148063	ATU010003	ATL8C10965:6583..6134	gap2	ATCEA4C88953_1	97							
148064	ATU010004	ATL8C7463:616..2251	gap2	ATCEA4S6112	97							
148065	ATU010005	ATL8C7456:264..1	gap2	ATCEA4S30236	97							
148066	ATU010006	ATL8C33344:2228..1561	gap2	ATCEA4S12828, ATCEA4S321	97, 94							
148067	ATU010007	ATL8C12051:1	gap2	ATCEA4C1606	97, 96,							

		..804		6, ATCEA4 S17178 , ATCEA4 S32545 , ATCEA4 S11835 , ATCEA4 S32591 , ATCEA4 C86_10	93, 87, 86, 82							
148068	ATU010 008	ATL8C7 378:48 7..44	gap2	ATCEA4 C23985 _1	97							
148069	ATU010 009	ATL8C2 1699:2 7..401	gap2	ATCEA4 S13011	97							
148070	ATU010 010	ATL8C2 1724:4 87..86 6	gap2	ATCEA4 S12990	97							
148071	ATU010 011	ATL8C2 2324:1 838..1 695	gap2	ATCEA4 C4989_ 1, ATCEA4 C543_9 , ATCEA4 S11217	97, 86, 82							
148072	ATU010 012	ATL8S2 6691:4 10..54 8	gap2	ATCEA4 C76894 _1	97							
148073	ATU010 013	ATL8C3 2977:5 26..14 2	gap2	ATCEA4 S27372	97							
148074	ATU010 014	ATL8C1 1815:9 18..40	gap2	ATCEA4 C543_8 ,	97, 97, 97							

		9		ATCEA4C543_12, ATCEA4C543_9								
148075	ATU010015	ATL8C38387:1..137	gap2	ATCEA4S6298	97							
148076	ATU010016	ATL8C32344:679..1	gap2	ATCEA4C1900_3	97							
148077	ATU010017	ATL8C21842:3838..3324	gap2	ATCEA4S16038, ATCEA4C79723_2	97, 96							
148078	ATU010018	ATL8C7131:338..476	gap2	ATCEA4S36321	97							
148079	ATU010019	ATL8C7109:1..67	gap2	ATCEA4S3761	97							
148080	ATU010020	ATL8C21841:500..638	gap2	ATCEA4S13919	97							
148081	ATU010021	ATL8C10997:4290..4681	gap2	ATCEA4S2139	97							
148082	ATU010022	ATL8C21814:3830..2772	gap2	ATCEA4C80028_1, ATCEA4C25681_1	96, 96			g4056493	100	720	4.7e-61	(AC005896) unknown protein [Arabidopsis thaliana]
148083	ATU010023	ATL8C25228:1038..1	gap2	ATCEA4S19824	97							

		466										
148084	ATU010024	ATL8C49492:1..336	gap2	ATCEA4C24369_1	97							
148085	ATU010025	ATL8C21960:1950..1574	gap2	ATCEA4C34214_1	97							
148086	ATU010026	ATL8C7043:364..593	gap2	ATCEA4S35003	97							
148087	ATU010027	ATL8C35946:1..74	gap2	ATCEA4C25051_1	97							
148088	ATU010028	ATL8C33042:268..46	gap2	ATCEA4S6139	97							
148089	ATU010029	ATL8C38391:516..308	gap2	ATCEA4S10780	97							
148090	ATU010030	ATL8C22007:95..1	gap2	ATCEA4S13397	97							
148091	ATU010031	ATL8C22013:709..872	gap2	ATCEA4S673	97							
148092	ATU010032	ATL8C6981:772..1038	gap2	ATCEA4S12225	97							
148093	ATU010033	ATL8C41363:298..605	gap2	ATCEA4S3519	97							
148094	ATU010034	ATL8C6975:1959..2546	gap2	ATCEA4C27687_1	97							
148095	ATU010035	ATL8C22041:551..104	gap2	ATCEA4C35501_1	97							

148096	ATU0100036	ATL8C8905:1184..1508	gap2	ATCEA4S27285, ATCEA4S34054	97, 92							
148097	ATU0100037	ATL8C25198:2248..2031	gap2	ATCEA4S12375	97							
148098	ATU0100038	ATL8C22043:1..153	gap2	ATCEA4C26058_1	97							
148099	ATU0100039	ATL8C38549:1..118	gap2	ATCEA4C58253_1	97							
148100	ATU0100040	ATL8C35811:1272..954	gap2	ATCEA4S29726	97							
148101	ATU0100041	ATL8C11089:235..1	gap2	ATCEA4S33793	97							
148102	ATU0100042	ATL8C32829:677..1385	gap2	ATCEA4C12441_1, ATCEA4S8820, ATCEA4S9287, ATCEA4C12441_5	97, 87, 86, 82							
148103	ATU0100043	ATL8C25192:2155..2500	gap2	ATCEA4C10995_1	97							
148104	ATU0100044	ATL8C12547:680..947	gap2	ATCEA4S11520	97							
148105	ATU0100045	ATL8C22076:1060..1302	gap2	ATCEA4S4182	97							

148106	ATU010046	ATL8C40197:86..1	gap2	ATCEA4S30826	97							
148107	ATU010047	ATL8C42939:373..962	gap2	ATCEA4S14668, ATCEA4C8528_7, ATCEA4S9994, ATCEA4S30720	97, 96, 85, 82							
148108	ATU010048	ATL8C6788:257..1	gap2	ATCEA4C120870_1	97							
148109	ATU010049	ATL8C33103:895..502	gap2	ATCEA4C10244_1	97							
148110	ATU010050	ATL8C9900:1168..1690	gap2	ATCEA4S3489, ATCEA4S2440	97, 91							
148111	ATU010051	ATL8C453:1082..1232	gap2	ATCEA4S28005, ATCEA4C4323_15	97, 92							
148112	ATU010052	ATL8C22345:1..360	gap2	ATCEA4C80707_1	97							
148113	ATU010053	ATL8C22362:90..1	gap2	ATCEA4C87000_1	97							
148114	ATU010054	ATL8C25131:1231..890	gap2	ATCEA4C63237_1	97							
148115	ATU010055	ATL8C12973:1752..1205	gap2	ATCEA4C80713_2	97							

148116	ATU010056	ATL8C6565:1..345	gap2	ATCEA4C35651_1	97							
148117	ATU010057	ATL8C6535:1310..900	gap2	ATCEA4S26082	97							
148118	ATU010058	ATL8C1705:701..1	gap2	ATCEA4C3644_1, ATCEA4S1543	97, 87							
148119	ATU010059	ATL8C22399:237..1	gap2	ATCEA4C21472_1	97							
148120	ATU010060	ATL8C112:1159..2237	gap2	ATCEA4C76824_1	97							
148121	ATU010061	ATL8C22554:755..896	gap2	ATCEA4C111191_1	97							
148122	ATU010062	ATL8C22572:120..587	gap2	ATCEA4C44123_1	97							
148123	ATU010063	ATL8C6501:938..651	gap2	ATCEA4S26756	97							
148124	ATU010064	ATL8C22704:2728..2290	gap2	ATCEA4C39748_1	97							
148125	ATU010065	ATL8C6497:34..263	gap2	ATCEA4C85154_1	97							
148126	ATU010066	ATL8C22716:239..673	gap2	ATCEA4C83577_1, ATCEA4S26988	97, 82							
148127	ATU010067	ATL8C22724:5	gap2	ATCEA4C81678	97							

		30..156		_1								
148128	ATU010068	ATL8C22751:178..497	gap2	ATCEA4C9279_1	97							
148129	ATU010069	ATL8C6469:72..1	gap2	ATCEA4S4816	97							
148130	ATU010070	ATL8C32129:991..248	gap2	ATCEA4C1813_1, ATCEA4S34165	97, 86							
148131	ATU010071	ATL8C36146:1..168	gap2	ATCEA4C1696_1	97							
148132	ATU010072	ATL8C25097:1..373	gap2	ATCEA4C68120_1	97							
148133	ATU010073	ATL8C6463:1..443	gap2	ATCEA4C119027_1	97							
148134	ATU010074	ATL8C12963:1..142	gap2	ATCEA4C62975_1, ATCEA4S33486	97, 93							
148135	ATU010075	ATL8C39183:4686..4111	gap2	ATCEA4C54376_1	97							
148136	ATU010076	ATL8C896:404..179	gap2	ATCEA4C54376_1	97							
148137	ATU010077	ATL8C23:1124..672	gap2	ATCEA4S15270	97							
148138	ATU010078	ATL8C49563:490..173	gap2	ATCEA4C151964_1	97							
148139	ATU010079	ATL8C38584:6	gap2	ATCEA4S13994	97							

		66..939										
148140	ATU010080	ATL8C6295:564..808	gap2	ATCEA4S949	97							
148141	ATU010081	ATL8C23214:598..1	gap2	ATCEA4S26178	97							
148142	ATU010082	ATL8C37396:749..1101	gap2	ATCEA4C7323_1	97							
148143	ATU010083	ATL8C23231:459..1255	gap2	ATCEA4C23784_1	97							
148144	ATU010084	ATL8C6205:704..1246	gap2	ATCEA4C11918_1	97							
148145	ATU010085	ATL8C25270:455..1	gap2	ATCEA4C47308_1	97							
148146	ATU010086	ATL8C554:1291..930	gap2	ATCEA4C82402_1	97							
148147	ATU010087	ATL8C32510:209..436	gap2	ATCEA4C25499_1	97							
148148	ATU010088	ATL8C2330:194..1	gap2	ATCEA4S1592	97							
148149	ATU010089	ATL8C23309:922..415	gap2	ATCEA4S5636	97							
148150	ATU010090	ATL8C21388:1764..1212	gap2	ATCEA4S32155,ATCEA4S36192	97, 83							
148151	ATU010091	ATL8C2314:73	gap2	ATCEA4C19233	97, 86							

		..781		_1, ATCEA4 S34184								
148152	ATU010 092	ATL8S1 2651:3 48..45 4	gap2	ATCEA4 C2243_ 1, ATCEA4 S22382	97, 97							
148153	ATU010 093	ATL8C2 3457:3 697..3 899	gap2	ATCEA4 S13721	97							
148154	ATU010 094	ATL8C5 986:88 0..428	gap2	ATCEA4 S9277	97							
148155	ATU010 095	ATL8C5 966:12 35..87 2	gap2	ATCEA4 C9241_ 1	97							
148156	ATU010 096	ATL8C2 3622:1 ..133	gap2	ATCEA4 S12957	97							
148157	ATU010 097	ATL8C5 943:61 90..59 34	gap2	ATCEA4 S26162	97							
148158	ATU010 098	ATL8S2 4057:4 67..1	gap2	ATCEA4 S35548 , ATCEA4 C13938 2	97, 94							
148159	ATU010 099	ATL8C2 1304:1 837..6 86	gap2	ATCEA4 C11971 9_2, ATCEA4 S35108 , ATCEA4 S25652	96, 91, 86			g38057 61	100	850	1.7e-84	(AC005 693) unknow n protei n [Arabi dopsis thalia na]
148160	ATU010 100	ATL8C3 3141:6	gap2	ATCEA4 C4258	97							

		16..796		1								
148161	ATU010101	ATL8C23663:1..430	gap2	ATCEA4S32900	97							
148162	ATU010102	ATL8C23694:130..1	gap2	ATCEA4C125507_1	97							
148163	ATU010103	ATL8C12592:1655..2558	gap2	ATCEA4C7669_1	97							
148164	ATU010104	ATL8C27175:694..1	gap2	ATCEA4C3522_1	97							
148165	ATU010105	ATL8C33119:284..561	gap2	ATCEA4C17920_3, ATCEA4C17920_1, ATCEA4S16365	97, 97, 95							
148166	ATU010106	ATL8C379:1954..3206	gap2	ATCEA4C22372_1	96			g4539317	100	1335	1.1e-123	(AL035679) putative protein [Arabidopsis thaliana]
148167	ATU010107	ATL8C37912:1135..863	gap2	ATCEA4C72202_3, ATCEA4S31249	97, 96							
148168	ATU010108	ATL8C12548:1256..1959	gap2	ATCEA4S2896, ATCEA4C17953_2	97, 93							
148169	ATU010	ATL8C1	gap2	ATCEA4	97, 83							

	109	3135:1570..1816		C804_1, ATCEA4S28895								
148170	ATU010110	ATL8C5732:16..412	gap2	ATCEA4S13128	97							
148171	ATU010111	ATL8C3994:830..1078	gap2	ATCEA4C121451_1	97							
148172	ATU010112	ATL8C38435:73..1	gap2	ATCEA4S864	97							
148173	ATU010113	ATL8C5663:246..528	gap2	ATCEA4S32285	97							
148174	ATU010114	ATL8C38448:602..1	gap2	ATCEA4C63_1	97							
148175	ATU010115	ATL8C12580:2986..2267	gap2	ATCEA4S35080, ATCEA4S31257	97, 93							
148176	ATU010116	ATL8C18149:1..263	gap2	ATCEA4C123073_1	97							
148177	ATU010117	ATL8C5604:156..563	gap2	ATCEA4C78706_1	97							
148178	ATU010118	ATL8C5599:1292..1058	gap2	ATCEA4S1334	97							
148179	ATU010119	ATL8C24035:283..673	gap2	ATCEA4S27073	97							
148180	ATU010120	ATL8C5533:1..363	gap2	ATCEA4S840	97							
148181	ATU010121	ATL8C21276:6	gap2	ATCEA4C69693	97							

		45..922		_1								
148182	ATU010122	ATL8C24070:701..98	gap2	ATCEA4C6940_1	97							
148183	ATU010123	ATL8C11305:869..645	gap2	ATCEA4S1311	97							
148184	ATU010124	ATL8C26263:1624..2337	gap2	ATCEA4C80707_1, ATCEA4C26598_1	97, 96							
148185	ATU010125	ATL8S9953:291..165	gap2	ATCEA4C89664_1	97							
148186	ATU010126	ATL8C33370:841..539	gap2	ATCEA4S27445	97							
148187	ATU010127	ATL8C33000:1026..341	gap2	ATCEA4C36955_3, ATCEA4C36955_2	97, 95							
148188	ATU010128	ATL8C38483:855..467	gap2	ATCEA4C6057_1	97							
148189	ATU010129	ATL8C38037:1..363	gap2	ATCEA4C866_1, ATCEA4C866_2	97, 84							
148190	ATU010130	ATL8C38503:370..756	gap2	ATCEA4S32887	97							
148191	ATU010131	ATL8C24228:223..57	gap2	ATCEA4S10666	97							

		3										
148192	ATU010132	ATL8C24297:2105..2573	gap2	ATCEA4C33114_1	97							
148193	ATU010133	ATL8C24335:671..298	gap2	ATCEA4S11299	97							
148194	ATU010134	ATL8C32983:394..632	gap2	ATCEA4S1454, ATCEA4S2196	97, 94							
148195	ATU010135	ATL8C38218:552..670	gap2	ATCEA4C89807_1	97							
148196	ATU010136	ATL8S26125:288..408	gap2	ATCEA4C641_1	97							
148197	ATU010137	ATL8C6521:251..1	gap2	ATCEA4C104719 2	97							
148198	ATU010138	ATL8S18847:581..724	gap2	ATCEA4C23052_1	97							
148199	ATU010139	ATL8C24422:304..51	gap2	ATCEA4S2172	97							
148200	ATU010140	ATL8C38547:1077..193	gap2	ATCEA4C20460_1	97							
148201	ATU010141	ATL8C33507:1..277	gap2	ATCEA4S26688, ATCEA4C2347_5	97, 89							
148202	ATU010142	ATL8C1292:2523..21	gap2	ATCEA4C4677_1	97							

		24										
148203	ATU0101 43	ATL8S29504:1..174	gap2	ATCEA4C49078_1	97							
148204	ATU0101 44	ATL8C24623:574..962	gap2	ATCEA4S2716	97							
148205	ATU0101 45	ATL8C24623:1013..581	gap2	ATCEA4S974	97							
148206	ATU0101 46	ATL8C24672:1502..1781	gap2	ATCEA4S26062	97							
148207	ATU0101 47	ATL8C42977:675..497	gap2	ATCEA4S12828	97							
148208	ATU0101 48	ATL8C33388:2084..1882	gap2	ATCEA4S12562	97							
148209	ATU0101 49	ATL8C50198:1..223	gap2	ATCEA4S12866	97							
148210	ATU0101 50	ATL8C50195:331..1	gap2	ATCEA4S11259	97							
148211	ATU0101 51	ATL8C50175:365..237	gap2	ATCEA4S2524	97							
148212	ATU0101 52	ATL8C24674:757..253	gap2	ATCEA4C33869_1	97							
148213	ATU0101 53	ATL8C41177:1..274	gap2	ATCEA4S5881	97							
148214	ATU0101 54	ATL8C50151:1..284	gap2	ATCEA4C74701_1	97							

148215	ATU0101155	ATL8C12916:1..94	gap2	ATCEA4S17200	97							
148216	ATU0101156	ATL8C50121:444..57	gap2	ATCEA4S10830	97							
148217	ATU0101157	ATL8C12543:1823..1956	gap2	ATCEA4S31645, ATCEA4C18752_2, ATCEA4C18752_1	97, 97, 90							
148218	ATU0101158	ATL8C24833:1..414	gap2	ATCEA4C15812_1	97							
148219	ATU0101159	ATL8C33391:303..491	gap2	ATCEA4S26761	97							
148220	ATU0101160	ATL8C6672:688..90	gap2	ATCEA4C4732_1	97							
148221	ATU0101161	ATL8C12819:1..219	gap2	ATCEA4C39940_1	97							
148222	ATU0101162	ATL8C35284:181..1	gap2	ATCEA4C39940_1	97							
148223	ATU0101163	ATL8C4117:1776..1069	gap2	ATCEA4C68437_1	97							
148224	ATU0101164	ATL8C38179:1..322	gap2	ATCEA4S26420, ATCEA4S20810	97, 82							
148225	ATU0101165	ATL8C12830:915..1775	gap2	ATCEA4S3094, ATCEA4S30429	97, 84							

148226	ATU010166	ATL8C9268:628..936	gap2	ATCEA4S26409, ATCEA4S26363	97, 86							
148227	ATU010167	ATL8C24871:674..32	gap2	ATCEA4S6152	97							
148228	ATU010168	ATL8C26886:772..137	gap2	ATCEA4C45092_1	97							
148229	ATU010169	ATL8C38554:392..1236	gap2	ATCEA4C12024_1	97							
148230	ATU010170	ATL8C20823:156..1	gap2	ATCEA4C122819_1, ATCEA4S27468	97, 97							
148231	ATU010171	ATL8C49838:328..1139	gap2	ATCEA4S1867	97							
148232	ATU010172	ATL8S24807:468..1	gap2	ATCEA4C7229_2	97							
148233	ATU010173	ATL8C48885:1..169	gap2	ATCEA4S36346	97							
148234	ATU010174	ATL8C25991:1..255	gap2	ATCEA4S30533	97							
148235	ATU010175	ATL8C32441:1505..1234	gap2	ATCEA4C33794_1	97							
148236	ATU010176	ATL8C34964:1..570	gap2	ATCEA4C10085_1	97							
148237	ATU010177	ATL8C48855:267..69	gap2	ATCEA4S5921	97							

		3										
148238	ATU0101 78	ATL8C49530:1..243	gap2	ATCEA4C75171_1	97							
148239	ATU0101 79	ATL8C47901:133..1	gap2	ATCEA4C1977_1	97							
148240	ATU0101 80	ATL8C32616:2829..3245	gap2	ATCEA4S2298, ATCEA4S6101	97, 88							
148241	ATU0101 81	ATL8C32613:1727..979	gap2	ATCEA4C121926_2, ATCEA4C121926_1, ATCEA4S7834, ATCEA4S30913	97, 95, 87, 86							
148242	ATU0101 82	ATL8C48821:1104..1357	gap2	ATCEA4S29733	97							
148243	ATU0101 83	ATL8C48794:129..360	gap2	ATCEA4S32571	97							
148244	ATU0101 84	ATL8C26186:1086..743	gap2	ATCEA4S2507	97							
148245	ATU0101 85	ATL8C4879:1891..1472	gap2	ATCEA4C100035_1	97							
148246	ATU0101 86	ATL8C48783:2528..1977	gap2	ATCEA4C1747_1	97							
148247	ATU0101 87	ATL8C42142:308..1	gap2	ATCEA4S36256,	97, 87, 83							

				ATCEA4S23701, ATCEA4S21197								
148248	ATU010188	ATL8C26231:1100..813	gap2	ATCEA4C122779_1	97							
148249	ATU010189	ATL8C48740:542..102	gap2	ATCEA4C118002_1	97							
148250	ATU010190	ATL8C26327:1..323	gap2	ATCEA4S14690	97							
148251	ATU010191	ATL8C48734:320..12	gap2	ATCEA4S36193	97							
148252	ATU010192	ATL8C33743:787..640	gap2	ATCEA4S11951	97							
148253	ATU010193	ATL8C48683:1859..1956	gap2	ATCEA4S5478	97							
148254	ATU010194	ATL8C48681:2829..2959	gap2	ATCEA4S13336	97							
148255	ATU010195	ATL8C48610:1070..618	gap2	ATCEA4C44951_1	97							
148256	ATU010196	ATL8C4861:1913..1776	gap2	ATCEA4S253	97							
148257	ATU010197	ATL8C48592:168..654	gap2	ATCEA4C30848_2	97							
148258	ATU010	ATL8C2	gap2	ATCEA4	97							

	198	6367:699..833		C5889_1								
148259	ATU010199	ATL8C48508:597..224	gap2	ATCEA4S11429	97							
148260	ATU010200	ATL8C2643:788..394	gap2	ATCEA4C5311_1	97							
148261	ATU010201	ATL8C48475:1539..1040	gap2	ATCEA4C21381_1	97							
148262	ATU010202	ATL8C15809:1..258	gap2	ATCEA4C116722_1	97							
148263	ATU010203	ATL8C10192:1..89	gap2	ATCEA4C83522_1	97							
148264	ATU010204	ATL8C48174:142..1	gap2	ATCEA4C21432_1	97							
148265	ATU010205	ATL8C48397:1221..808	gap2	ATCEA4S6062	97							
148266	ATU010206	ATL8C26564:1..88	gap2	ATCEA4S30585	97							
148267	ATU010207	ATL8C48377:817..980	gap2	ATCEA4S13909	97							
148268	ATU010208	ATL8C35377:1247..1423	gap2	ATCEA4S33545	97							
148269	ATU010209	ATL8C38632:579..1274	gap2	ATCEA4C129486_1, ATCEA4S31948	97, 93							
148270	ATU010	ATL8C3	gap2	ATCEA4	97							

	210	3838:69..1		S13746								
148271	ATU010211	ATL8C48331:444..994	gap2	ATCEA4S7758	97							
148272	ATU010212	ATL8C48251:1240..741	gap2	ATCEA4C4805_1	97							
148273	ATU010213	ATL8C26668:1345..961	gap2	ATCEA4S13176	97							
148274	ATU010214	ATL8C11704:213,.468	gap2	ATCEA4C76184_2, ATCEA4S22239	97, 92							
148275	ATU010215	ATL8S6993:667..532	gap2	ATCEA4C24947_1	97							
148276	ATU010216	ATL8C11710:1380..1479	gap2	ATCEA4S32514	97							
148277	ATU010217	ATL8C33881:261..585	gap2	ATCEA4S30335	97							
148278	ATU010218	ATL8C37623:399..899	gap2	ATCEA4C12528_1, ATCEA4S36140	97, 82							
148279	ATU010219	ATL8C40847:710..262	gap2	ATCEA4C10470_1	97							
148280	ATU010220	ATL8C26736:995..823	gap2	ATCEA4C79697_1	97							
148281	ATU010	ATL8C3	gap2	ATCEA4	97							

	221	3890:2563..2176		S50								
148282	ATU010222	ATL8C28571:68..1907	gap2	ATCEA4C67067_1, ATCEA4C26600_1, ATCEA4S12142	97, 93, 82							
148283	ATU010223	ATL8S996:126..581	gap2	ATCEA4S1065	97							
148284	ATU010224	ATL8C20225:397..156	gap2	ATCEA4C9607_1	97							
148285	ATU010225	ATL8S9767:1..185	gap2	ATCEA4S31860	97							
148286	ATU010226	ATL8C33913:1..121	gap2	ATCEA4S15141	97							
148287	ATU010227	ATL8C24114:1..834	gap2	ATCEA4C941_2, ATCEA4C941_1	97, 95							
148288	ATU010228	ATL8S9675:468..1	gap2	ATCEA4C135420_1	97							
148289	ATU010229	ATL8C13589:1..299	gap2	ATCEA4C77414_1	97							
148290	ATU010230	ATL8S26191:62..421	gap2	ATCEA4C1634_1, ATCEA4S23319	97, 83							
148291	ATU010231	ATL8C33962:1942..1629	gap2	ATCEA4S30039	97							

148292	ATU0102 32	ATL8S9403:186..1	gap2	ATCEA4C1530_1	97							
148293	ATU0102 33	ATL8S939:93..1	gap2	ATCEA4S30100	97							
148294	ATU0102 34	ATL8C26859:352..593	gap2	ATCEA4S812	97							
148295	ATU0102 35	ATL8S30465:342..105	gap2	ATCEA4C20291_2, ATCEA4C20291_1	97, 88							
148296	ATU0102 36	ATL8C48099:813..1542	gap2	ATCEA4C592_1	97							
148297	ATU0102 37	ATL8S8931:111..388	gap2	ATCEA4S15414	97							
148298	ATU0102 38	ATL8C24119:418..894	gap2	ATCEA4C18837_1	97							
148299	ATU0102 39	ATL8C26919:1088..916	gap2	ATCEA4S32928	97							
148300	ATU0102 40	ATL8C26921:977..716	gap2	ATCEA4S31860	97							
148301	ATU0102 41	ATL8C2697:1..186	gap2	ATCEA4C133546_1	97							
148302	ATU0102 42	ATL8C48018:579..87	gap2	ATCEA4C131080_1	97							
148303	ATU0102 43	ATL8S8585:14..399	gap2	ATCEA4S12227	97							

148304	ATU010244	ATL8C13313:821..948	gap2	ATCEA4S3695	97							
148305	ATU010245	ATL8C11771:569..337	gap2	ATCEA4C44037_1	97							
148306	ATU010246	ATL8S8464:440..1	gap2	ATCEA4S6009	97							
148307	ATU010247	ATL8C13563:1737..523	gap2	ATCEA4C110560_1, ATCEA4S7290	97, 89							
148308	ATU010248	ATL8S28174:173..407	gap2	ATCEA4C3207_1, ATCEA4C3207_2	97, 92							
148309	ATU010249	ATL8S8363:136..481	gap2	ATCEA4C103002_1	97							
148310	ATU010250	ATL8S8265:85..462	gap2	ATCEA4S30552	97							
148311	ATU010251	ATL8C27029:533..643	gap2	ATCEA4S35280, ATCEA4S28745	97, 90							
148312	ATU010252	ATL8S7903:81..1	gap2	ATCEA4S32406	97							
148313	ATU010253	ATL8C38897:212..75	gap2	ATCEA4S2979	97							
148314	ATU010254	ATL8C15830:461..849	gap2	ATCEA4C50530_1	97							
148315	ATU010	ATL8C4	gap2	ATCEA4	97, 88							

	255	799:32 57..35 07		S14473 , ATCEA4 S14472								
148316	ATU010 256	ATL8S7 734:1. .205	gap2	ATCEA4 S24430	97							
148317	ATU010 257	ATL8C4 7987:1 73..40 7	gap2	ATCEA4 S7373	97							
148318	ATU010 258	ATL8C4 7976:1 492..1 303	gap2	ATCEA4 S30018	97							
148319	ATU010 259	ATL8C4 7969:1 945..1 536	gap2	ATCEA4 S30532	97							
148320	ATU010 260	ATL8C2 709:76 3..114 0	gap2	ATCEA4 S30553	97							
148321	ATU010 261	ATL8C2 0058:6 43..1	gap2	ATCEA4 C60664 _1, ATCEA4 S36113	97, 88							
148322	ATU010 262	ATL8C2 7146:3 70..60	gap2	ATCEA4 S30239	97							
148323	ATU010 263	ATL8C1 5723:8 14..1	gap2	ATCEA4 S27279 , ATCEA4 C82852 1	97, 92							
148324	ATU010 264	ATL8C2 7155:1 138..1 047	gap2	ATCEA4 S26611	97							
148325	ATU010 265	ATL8C2 0101:8 52..25	gap2	ATCEA4 C4414_ 1	97							

		9										
148326	ATU010266	ATL8C47900:3889..3333	gap2	ATCEA4C39840_1	97							
148327	ATU010267	ATL8C49765:2295..2755	gap2	ATCEA4C57640_1	97							
148328	ATU010268	ATL8C40692:591..1055	gap2	ATCEA4S30448	97							
148329	ATU010269	ATL8C42827:217..623	gap2	ATCEA4C52513_2	97							
148330	ATU010270	ATL8C27278:219..913	gap2	ATCEA4C26407_1	97							
148331	ATU010271	ATL8S6423:94..16	gap2	ATCEA4S36264	97							
148332	ATU010272	ATL8C27335:1087..1504	gap2	ATCEA4S19930	97							
148333	ATU010273	ATL8C11808:214..915	gap2	ATCEA4C14780_1, ATCEA4C14780_2	97, 97							
148334	ATU010274	ATL8S5970:191..550	gap2	ATCEA4C132488_1	97							
148335	ATU010275	ATL8S5935:325..674	gap2	ATCEA4C4652_1	97							
148336	ATU010276	ATL8C39281:654..1	gap2	ATCEA4C1777_1	97							
148337	ATU010	ATL8C4	gap2	ATCEA4	97							

	277	7773:271..594		S12069								
148338	ATU010278	ATL8C49163:664..1	gap2	ATCEA4S10646, ATCEA4S10455, ATCEA4S617	97, 97, 87							
148339	ATU010279	ATL8C47739:915..1087	gap2	ATCEA4S774	97							
148340	ATU010280	ATL8C47726:372..1	gap2	ATCEA4S4202	97							
148341	ATU010281	ATL8C17149:1..131	gap2	ATCEA4C60208_1	97							
148342	ATU010282	ATL8C13667:1..472	gap2	ATCEA4C907_2, ATCEA4S24199, ATCEA4S10333, ATCEA4S23992	97, 95, 92, 85							
148343	ATU010283	ATL8C17886:1559..1701	gap2	ATCEA4C6388_1	97							
148344	ATU010284	ATL8C47702:182..1	gap2	ATCEA4S30355	97							
148345	ATU010285	ATL8C27545:371..1	gap2	ATCEA4S19070	97							
148346	ATU010286	ATL8C34113:3	gap2	ATCEA4S30319	97							

		5..439										
148347	ATU010287	ATL8C47660:1561..1648	gap2	ATCEA4S29531	97							
148348	ATU010288	ATL8C49145:1..1358	gap2	ATCEA4C16958_1, ATCEA4C34690_3, ATCEA4C34690_1, ATCEA4S32926	97, 95, 95, 95							
148349	ATU010289	ATL8C47629:80..645	gap2	ATCEA4S16871	97							
148350	ATU010290	ATL8C27592:11986..12370	gap2	ATCEA4C71122_1	97							
148351	ATU010291	ATL8C11823:238..595	gap2	ATCEA4S11127	97							
148352	ATU010292	ATL8S4438:360..1	gap2	ATCEA4S12810	97							
148353	ATU010293	ATL8S438:188..1	gap2	ATCEA4S16040	97							
148354	ATU010294	ATL8C27652:70..1	gap2	ATCEA4C630763	97							
148355	ATU010295	ATL8C47536:116..354	gap2	ATCEA4S10716	97							
148356	ATU010296	ATL8S405:46..573	gap2	ATCEA4S36262	97							
148357	ATU010	ATL8C4	gap2	ATCEA4	97							

	297	7508:90..387		S5754								
148358	ATU010298	ATL8C19144:666..475	gap2	ATCEA4C44407_1	97							
148359	ATU010299	ATL8C14700:64..602	gap2	ATCEA4C42258_1	97							
148360	ATU010300	ATL8C25086:1..355	gap2	ATCEA4C26934_1	97							
148361	ATU010301	ATL8S3554:1..325	gap2	ATCEA4S27359	97							
148362	ATU010302	ATL8S3497:76..192	gap2	ATCEA4S5593	97							
148363	ATU010303	ATL8C27965:973..897	gap2	ATCEA4S26365	97							
148364	ATU010304	ATL8C473:5076..4586	gap2	ATCEA4C35767_1	97							
148365	ATU010305	ATL8C47287:739..1126	gap2	ATCEA4S2946	97							
148366	ATU010306	ATL8S3182:1..302	gap2	ATCEA4S32160	97							
148367	ATU010307	ATL8C49059:307..612	gap2	ATCEA4C13383_1	97							
148368	ATU010308	ATL8S312:466..383	gap2	ATCEA4S30347	97							
148369	ATU010309	ATL8C34177:948..566	gap2	ATCEA4S12519	97							

148370	ATU010310	ATL8C47254:1818..1532	gap2	ATCEA4S23194	97							
148371	ATU010311	ATL8C13830:237..916	gap2	ATCEA4S8232, ATCEA4S578	97, 88							
148372	ATU010312	ATL8C2811:217..471	gap2	ATCEA4S29539	97							
148373	ATU010313	ATL8S30954:250..1	gap2	ATCEA4S3807	97							
148374	ATU010314	ATL8C5881:1390..296	gap2	ATCEA4C421_2, ATCEA4S33377, ATCEA4S21436	97, 91, 90							
148375	ATU010315	ATL8C28139:540..818	gap2	ATCEA4C20072_1	97							
148376	ATU010316	ATL8C47213:1848..2272	gap2	ATCEA4C21320_1	97							
148377	ATU010317	ATL8C19755:1590..1676	gap2	ATCEA4C674_1	97							
148378	ATU010318	ATL8C40638:2287..2548	gap2	ATCEA4S30655	97							
148379	ATU010319	ATL8C3903:3642..4815	gap2	ATCEA4C21862_1	96			g4582455	100	563	2.3e-54	(AC007071) putative receptor

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148380	ATU010320	ATL8C4904:1091..1565	gap2	ATCEA4C29952_1, ATCEA4S3157	97, 83							
148381	ATU010321	ATL8C28228:146..1	gap2	ATCEA4S31679	97							
148382	ATU010322	ATL8C47121:715..375	gap2	ATCEA4S11132	97							
148383	ATU010323	ATL8C11919:375..874	gap2	ATCEA4S36094	97							
148384	ATU010324	ATL8C39025:756..384	gap2	ATCEA4S33193	97							
148385	ATU010325	ATL8S30724:433..682	gap2	ATCEA4S29745	97							
148386	ATU010326	ATL8S30706:139..1	gap2	ATCEA4S26329	97							
148387	ATU010327	ATL8C36021:608..1	gap2	ATCEA4C31889_3, ATCEA4S26923, ATCEA4C31889_1	97, 97, 89							
148388	ATU010	ATL8C1	gap2	ATCEA4	97							

	328	2841:503..90		S221								
148389	ATU010329	ATL8C15693:1..664	gap2	ATCEA4C1695_1	97							
148390	ATU010330	ATL8S30347:197..1	gap2	ATCEA4C18148_1	97							
148391	ATU010331	ATL8C47022:2157..1856	gap2	ATCEA4S25962	97							
148392	ATU010332	ATL8S30342:330..564	gap2	ATCEA4C10088_1	97							
148393	ATU010333	ATL8C28316:746..931	gap2	ATCEA4S12786	97							
148394	ATU010334	ATL8S20908:1..619	gap2	ATCEA4C49863_1	97							
148395	ATU010335	ATL8C28501:543..768	gap2	ATCEA4S30339	97							
148396	ATU010336	ATL8C43747:116..1	gap2	ATCEA4S34154, ATCEA4C2108_1	97, 92							
148397	ATU010337	ATL8C34208:5069..5546	gap2	ATCEA4S3244	97							
148398	ATU010338	ATL8S29685:1..137	gap2	ATCEA4S931	97							
148399	ATU010339	ATL8C28565:1811..2148	gap2	ATCEA4S553	97							

148400	ATU010340	ATL8C11932:1047..527	gap2	ATCEA4C131223_1	97							
148401	ATU010341	ATL8S29545:284..496	gap2	ATCEA4S2805	97							
148402	ATU010342	ATL8C28649:536..446	gap2	ATCEA4S1205	97							
148403	ATU010343	ATL8C46956:1..292	gap2	ATCEA4S30595	97							
148404	ATU010344	ATL8S29154:1..180	gap2	ATCEA4S33284, ATCEA4S34681	97, 95							
148405	ATU010345	ATL8C11942:507..1	gap2	ATCEA4C513171	97							
148406	ATU010346	ATL8C28654:1017..779	gap2	ATCEA4C119434_1	97							
148407	ATU010347	ATL8C46906:599..135	gap2	ATCEA4C19778_1	97							
148408	ATU010348	ATL8C39028:2285..2748	gap2	ATCEA4S25971	97							
148409	ATU010349	ATL8C35643:403..766	gap2	ATCEA4S32151	97							
148410	ATU010350	ATL8C24170:865..1	gap2	ATCEA4S13886, ATCEA4C15954	97, 94, 83							

				_1, ATCEA4 C39513 _1								
148411	ATU010 351	ATL8C2 867:47 0..703	gap2	ATCEA4 S30698	97							
148412	ATU010 352	ATL8S2 842:60 9..260	gap2	ATCEA4 S11243	97							
148413	ATU010 353	ATL8S2 8309:2 41..45 1	gap2	ATCEA4 S577	97							
148414	ATU010 354	ATL8S2 8294:5 68..1	gap2	ATCEA4 C21640 _1	97							
148415	ATU010 355	ATL8S2 8268:1 ..299	gap2	ATCEA4 C4213_ 1	97							
148416	ATU010 356	ATL8S2 8072:5 74..36 7	gap2	ATCEA4 C549_1	97							
148417	ATU010 357	ATL8C2 4176:1 672..7 04	gap2	ATCEA4 S15120	96			g36436 01	100	476	9.8e-40	(AC005 395) hypoth etical protei n [Arabi dopsis thalia na]
148418	ATU010 358	ATL8S2 7885:5 9..582	gap2	ATCEA4 C9868_ 1	97							
148419	ATU010 359	ATL8C2 877:10 67..71 0	gap2	ATCEA4 C34361 _2	97							
148420	ATU010 360	ATL8C2 8778:1 ..441	gap2	ATCEA4 C30148 _1	97							

148421	ATU0103 61	ATL8C28831:659..120	gap2	ATCEA4C80917_1	97							
148422	ATU0103 62	ATL8C28448:2012..1719	gap2	ATCEA4C15680_1, ATCEA4S10254	97, 87							
148423	ATU0103 63	ATL8C28893:1..198	gap2	ATCEA4S22893	97							
148424	ATU0103 64	ATL8C48943:197..678	gap2	ATCEA4S30546, ATCEA4C76565_1	97, 95							
148425	ATU0103 65	ATL8C28965:748..1120	gap2	ATCEA4S12854	97							
148426	ATU0103 66	ATL8S27279:510..316	gap2	ATCEA4C20536_1	97							
148427	ATU0103 67	ATL8S27271:373..169	gap2	ATCEA4S1576	97							
148428	ATU0103 68	ATL8C39080:681..1134	gap2	ATCEA4C46437_2	97							
148429	ATU0103 69	ATL8S26664:544..700	gap2	ATCEA4C100426_1	97							
148430	ATU0103 70	ATL8C14602:768..354	gap2	ATCEA4C6319_1	97							
148431	ATU0103 71	ATL8S263:340	gap2	ATCEA4S36248	97							

		..492										
148432	ATU010372	ATL8S26230:1..86	gap2	ATCEA4S17157	97							
148433	ATU010373	ATL8S26196:392..546	gap2	ATCEA4S3154	97							
148434	ATU010374	ATL8C29163:971..1	gap2	ATCEA4S10832	97							
148435	ATU010375	ATL8C35624:1..146	gap2	ATCEA4S35057	97							
148436	ATU010376	ATL8C12030:211..1	gap2	ATCEA4S11015	97							
148437	ATU010377	ATL8C29171:361..9	gap2	ATCEA4S11688	97							
148438	ATU010378	ATL8C34258:614..21	gap2	ATCEA4C88402_1	97							
148439	ATU010379	ATL8C40518:1240..1377	gap2	ATCEA4S26862	97							
148440	ATU010380	ATL8S25658:1..436	gap2	ATCEA4C22022_1	97							
148441	ATU010381	ATL8C48906:803..1379	gap2	ATCEA4C75_2	97							
148442	ATU010382	ATL8C29288:1..210	gap2	ATCEA4S13075	97							
148443	ATU010383	ATL8S25246:1..201	gap2	ATCEA4S18452	97							
148444	ATU010384	ATL8C46610:271..706	gap2	ATCEA4C30040_1	97							

148445	ATU010385	ATL8C46580:1087..636	gap2	ATCEA4C4560_2	97							
148446	ATU010386	ATL8S24643:70..169	gap2	ATCEA4C18581_2	97							
148447	ATU010387	ATL8C29381:1429..1710	gap2	ATCEA4S4873	97							
148448	ATU010388	ATL8C19408:734..629	gap2	ATCEA4S31309	97							
148449	ATU010389	ATL8C39127:62..576	gap2	ATCEA4S26840	97							
148450	ATU010390	ATL8C46546:506..916	gap2	ATCEA4C116596_1	97							
148451	ATU010391	ATL8S24343:1..195	gap2	ATCEA4C117877_1	97							
148452	ATU010392	ATL8S2432:489..595	gap2	ATCEA4S28089	97							
148453	ATU010393	ATL8C42072:1618..990	gap2	ATCEA4S23819, ATCEA4C82061_3, ATCEA4C82061_1, ATCEA4C30373_1	97, 93, 91, 84							
148454	ATU010394	ATL8C29407:516..102	gap2	ATCEA4C26261_1	97							

148455	ATU010395	ATL8S24153:87..301	gap2	ATCEA4S26602	97							
148456	ATU010396	ATL8C46517:1..202	gap2	ATCEA4S2034	97							
148457	ATU010397	ATL8S24079:340..1	gap2	ATCEA4C131311 1	97							
148458	ATU010398	ATL8C2946:2365..1858	gap2	ATCEA4S14650	97							
148459	ATU010399	ATL8C4048:539..398	gap2	ATCEA4S1933	97							
148460	ATU010400	ATL8S23620:1..537	gap2	ATCEA4C866_2	97							
148461	ATU010401	ATL8C34365:515..88	gap2	ATCEA4S4036	97							
148462	ATU010402	ATL8C1212:2417..2780	gap2	ATCEA4S26345	97							
148463	ATU010403	ATL8C29570:1454..1028	gap2	ATCEA4S9980	97							
148464	ATU010404	ATL8C29617:1..206	gap2	ATCEA4S11537	97							
148465	ATU010405	ATL8C46324:1229..851	gap2	ATCEA4C67598_1	97							
148466	ATU010406	ATL8C46324:1685..2054	gap2	ATCEA4S2787	97							
148467	ATU010407	ATL8C4632:1..118	gap2	ATCEA4S32330	97							

148468	ATU010408	ATL8S23201:1..356	gap2	ATCEA4C73053_1	97							
148469	ATU010409	ATL8C2968:557..1	gap2	ATCEA4S1934	97							
148470	ATU010410.	ATL8C46233:198..1	gap2	ATCEA4C32489_1	97							
148471	ATU010411	ATL8C39239:1804..1298	gap2	ATCEA4S29081	97							
148472	ATU010412	ATL8C46264:295..517	gap2	ATCEA4S27118	97							
148473	ATU010413	ATL8S23002:134..442	gap2	ATCEA4S4875	97							
148474	ATU010414	ATL8C1621:697..906	gap2	ATCEA4S11275,ATCEA4S11274	97, 95							
148475	ATU010415	ATL8C29737:684..256	gap2	ATCEA4C13830_1	97							
148476	ATU010416	ATL8C46177:645..97	gap2	ATCEA4C87317_1	97							
148477	ATU010417	ATL8S22407:607..10	gap2	ATCEA4C30145_1	97							
148478	ATU010418	ATL8C46148:1326..979	gap2	ATCEA4S12317	97							
148479	ATU010419	ATL8C29763:1415..61	gap2	ATCEA4C123217_1	97							

148480	ATU010420	ATL8C50194:366..255	gap2	ATCEA4C19304_1	97							
148481	ATU010421	ATL8C4610:992..1406	gap2	ATCEA4C9301_1	97							
148482	ATU010422	ATL8C14175:644..270	gap2	ATCEA4S32359	97							
148483	ATU010423	ATL8C29782:37..361	gap2	ATCEA4S29998	97							
148484	ATU010424	ATL8C37228:975..77	gap2	ATCEA4C4366_1, ATCEA4S33055	97, 93							
148485	ATU010425	ATL8S22066:3..435	gap2	ATCEA4C8231_1	97							
148486	ATU010426	ATL8C14586:1..401	gap2	ATCEA4C45809_1	97							
148487	ATU010427	ATL8S21754:201..74	gap2	ATCEA4S36172	97							
148488	ATU010428	ATL8C46054:2084..2427	gap2	ATCEA4S11268	97							
148489	ATU010429	ATL8C42714:856..66	gap2	ATCEA4S35117, ATCEA4C920_1	97, 97							
148490	ATU010430	ATL8C46037:1367..894	gap2	ATCEA4S27405	97							
148491	ATU010431	ATL8S21360:1	gap2	ATCEA4C16422	97							

		..272		1								
148492	ATU010432	ATL8S21245:223..563	gap2	ATCEA4S7474	97							
148493	ATU010433	ATL8C45987:2196..2742	gap2	ATCEA4C18185_1	97							
148494	ATU010434	ATL8C45975:80..1	gap2	ATCEA4S30014	97							
148495	ATU010435	ATL8C12173:3544..3198	gap2	ATCEA4S7	97							
148496	ATU010436	ATL8C34476:292..1	gap2	ATCEA4S26506	97							
148497	ATU010437	ATL8C34483:97..1	gap2	ATCEA4S12179	97							
148498	ATU010438	ATL8C40385:262..474	gap2	ATCEA4S10461	97							
148499	ATU010439	ATL8C45918:817..689	gap2	ATCEA4S6223	97							
148500	ATU010440	ATL8C45902:412..799	gap2	ATCEA4S27410	97							
148501	ATU010441	ATL8C45879:960..62	gap2	ATCEA4S6618	97							
148502	ATU010442	ATL8S21011:208..576	gap2	ATCEA4C14582_1	97							
148503	ATU010443	ATL8S20852:132..45	gap2	ATCEA4C54478_1	97							

148504	ATU010444	ATL8C45834:228..99	gap2	ATCEA4C100981	97							
148505	ATU010445	ATL8C12180:674..162	gap2	ATCEA4S26175	97							
148506	ATU010446	ATL8C30032:2601..2292	gap2	ATCEA4S30072	97							
148507	ATU010447	ATL8C45792:1475..1233	gap2	ATCEA4S33185	97							
148508	ATU010448	ATL8S20610:1..188	gap2	ATCEA4S11597	97							
148509	ATU010449	ATL8C39254:787..600	gap2	ATCEA4S26316	97							
148510	ATU010450	ATL8C3008:1..337	gap2	ATCEA4S30333	97							
148511	ATU010451	ATL8C30115:1086..870	gap2	ATCEA4S30272	97							
148512	ATU010452	ATL8C28034:412..1	gap2	ATCEA4C932501	97							
148513	ATU010453	ATL8S3935:450..220	gap2	ATCEA4S35249, ATCEA4C1756_1	97, 97							
148514	ATU010454	ATL8C45760:1734..1287	gap2	ATCEA4S7432	97							
148515	ATU010455	ATL8C30184:4	gap2	ATCEA4S26485	97							

		58..803										
148516	ATU010456	ATL8C45744:528..142	gap2	ATCEA4C66570_1	97							
148517	ATU010457	ATL8S20099:488..625	gap2	ATCEA4S10701	97							
148518	ATU010458	ATL8S20059:626..197	gap2	ATCEA4S4857	97							
148519	ATU010459	ATL8C45678:1761..2085	gap2	ATCEA4S4215	97							
148520	ATU010460	ATL8S19544:1..357	gap2	ATCEA4C21559_1	97							
148521	ATU010461	ATL8S19541:96..334	gap2	ATCEA4S26137	97							
148522	ATU010462	ATL8C14540:1386..1523	gap2	ATCEA4S253	97							
148523	ATU010463	ATL8C48631:2130..2064	gap2	ATCEA4C150204_1	97							
148524	ATU010464	ATL8C30334:404..473	gap2	ATCEA4C8927_1	97							
148525	ATU010465	ATL8C30420:391..1	gap2	ATCEA4C59264_1	97							
148526	ATU010466	ATL8C3927:530..1	gap2	ATCEA4S36352	97							
148527	ATU010467	ATL8C30438:3	gap2	ATCEA4S30034	97							

		000..3319										
148528	ATU010468	ATL8C45537:156..631	gap2	ATCEA4C23605_1	97							
148529	ATU010469	ATL8C14430:465..197	gap2	ATCEA4S34281	97							
148530	ATU010470	ATL8C48591:1614..1298	gap2	ATCEA4S33529	97							
148531	ATU010471	ATL8C14528:931..684	gap2	ATCEA4S13863	97							
148532	ATU010472	ATL8C45371:575..798	gap2	ATCEA4S30030	97							
148533	ATU010473	ATL8C14422:635..110	gap2	ATCEA4C16065_2	97							
148534	ATU010474	ATL8C44458:167..1	gap2	ATCEA4C92318_1	97							
148535	ATU010475	ATL8C45343:1170..1538	gap2	ATCEA4S12795	97							
148536	ATU010476	ATL8C35609:102..24	gap2	ATCEA4S29513	97							
148537	ATU010477	ATL8S20198:167..80	gap2	ATCEA4C19014_1	97							
148538	ATU010478	ATL8C30552:3547..3911	gap2	ATCEA4S249	97							
148539	ATU010	ATL8C4	gap2	ATCEA4	97							

	479	4510:1777..2441		C40246_2								
148540	ATU010480	ATL8C30567:480..1553	gap2	ATCEA4C20772_1	97							
148541	ATU010481	ATL8C30578:652..869	gap2	ATCEA4C56231_1	97							
148542	ATU010482	ATL8C40348:1533..973	gap2	ATCEA4C96439_1	97							
148543	ATU010483	ATL8C30644:74..306	gap2	ATCEA4C151734_1	97							
148544	ATU010484	ATL8C30644:4468..4058	gap2	ATCEA4S4263	97							
148545	ATU010485	ATL8C19041:1..378	gap2	ATCEA4S3003, ATCEA4C29858_1	97, 97							
148546	ATU010486	ATL8C44528:540..878	gap2	ATCEA4C10744_2, ATCEA4C10744_1	97, 96							
148547	ATU010487	ATL8C42015:5846..5709	gap2	ATCEA4S253	97							
148548	ATU010488	ATL8C13403:233..1	gap2	ATCEA4C116013_1	97							
148549	ATU010489	ATL8C30719:2704..3030	gap2	ATCEA4S30427	97							

148550	ATU0104 90	ATL8S19358:1..331	gap2	ATCEA4C21810_1	97							
148551	ATU0104 91	ATL8C3134:69..541	gap2	ATCEA4C673_2, ATCEA4C673_1	97, 92							
148552	ATU0104 92	ATL8C24580:166..1	gap2	ATCEA4S811, ATCEA4S1983	97, 93							
148553	ATU0104 93	ATL8S19233:72..561	gap2	ATCEA4S36249	97							
148554	ATU0104 94	ATL8C39571:2198..2682	gap2	ATCEA4C27749_2, ATCEA4S24797	97, 97							
148555	ATU0104 95	ATL8C1479:1..345	gap2	ATCEA4C720_1	97							
148556	ATU0104 96	ATL8C25446:1..462	gap2	ATCEA4C4323_17, ATCEA4C4323_11	97, 93							
148557	ATU0104 97	ATL8C41464:724..1282	gap2	ATCEA4C6502_1	97							
148558	ATU0104 98	ATL8S10092:49..668	gap2	ATCEA4C12192_1	97							
148559	ATU0104 99	ATL8C10063:1..302	gap2	ATCEA4S10847, ATCEA4S6586	97, 86							
148560	ATU0105 00	ATL8C30784:1..271	gap2	ATCEA4S30202	97							

148561	ATU0105 01	ATL8S9465:451..1	gap2	ATCEA4C7484_1, ATCEA4S6206	97, 82							
148562	ATU0105 02	ATL8C2837:2195..482	gap2	ATCEA4C8641_1, ATCEA4S4833, ATCEA4S32768	97, 96, 89							
148563	ATU0105 03	ATL8S18882:310..472	gap2	ATCEA4S1355	97							
148564	ATU0105 04	ATL8C30864:179..673	gap2	ATCEA4S15265, ATCEA4S29127	97, 96							
148565	ATU0105 05	ATL8C14903:158..719	gap2	ATCEA4C98851_1	97							
148566	ATU0105 06	ATL8S18778:174..568	gap2	ATCEA4S12483	97							
148567	ATU0105 07	ATL8C18649:291..1	gap2	ATCEA4C116622_1	97							
148568	ATU0105 08	ATL8S18701:284..196	gap2	ATCEA4S12146	97							
148569	ATU0105 09	ATL8C14916:297..573	gap2	ATCEA4S5406	97							
148570	ATU0105 10	ATL8C35908:759..1240	gap2	ATCEA4C73647_1	97							

148571	ATU010511	ATL8C48913:627..906	gap2	ATCEA4C5328_1	97							
148572	ATU010512	ATL8S18595:494..352	gap2	ATCEA4S677	97							
148573	ATU010513	ATL8C43185:106..234	gap2	ATCEA4C23353_1	97							
148574	ATU010514	ATL8C35649:147..1	gap2	ATCEA4C76139_1	97							
148575	ATU010515	ATL8C30975:734..355	gap2	ATCEA4S3299	97							
148576	ATU010516	ATL8C33946:8008..7793	gap2	ATCEA4C66239_1	97							
148577	ATU010517	ATL8C7652:634..1594	gap2	ATCEA4C5344_1, ATCEA4S1450	97, 85							
148578	ATU010518	ATL8S18460:226..374	gap2	ATCEA4S9354	97							
148579	ATU010519	ATL8S18454:434..1	gap2	ATCEA4S4893	97							
148580	ATU010520	ATL8C446:4050..1575	gap2	ATCEA4C11437_1, ATCEA4C2434_1	96, 96			g1402878	100	1106	9.5e-73	(X98130) unknown [Arabidopsis thaliana]
148581	ATU010	ATL8C9	gap2	ATCEA4	97,							

	521	466:1421..4596		C4842_1, ATCEA4S35807, ATCEA4S3055	87, 86							
148582	ATU010522	ATL8C15091:52..350	gap2	ATCEA4S3381	97							
148583	ATU010523	ATL8S17907:281..479	gap2	ATCEA4S36156	97							
148584	ATU010524	ATL8C10163:2043..171	gap2	ATCEA4C5723_1, ATCEA4C54355_1, ATCEA4S17145, ATCEA4S7728	97, 94, 92, 83							
148585	ATU010525	ATL8C44094:627..30	gap2	ATCEA4C37420_1, ATCEA4S34781	97, 90							
148586	ATU010526	ATL8C14202:1..714	gap2	ATCEA4S21558, ATCEA4C1653_1	97, 95							
148587	ATU010527	ATL8C44917:1497..1037	gap2	ATCEA4C135963_1	97							
148588	ATU010528	ATL8C15154:1..618	gap2	ATCEA4C17686_1	97							
148589	ATU010	ATL8S1	gap2	ATCEA4	97							

	529	7843:5 54..26 3		C65857 _1								
148590	ATU010 530	ATL8C3 4287:1 535..8 51	gap2	ATCEA4 C15135 _1, ATCEA4 C15135 _2, ATCEA4 S26297	97, 91, 82							
148591	ATU010 531	ATL8C3 1854:1 17..93 6	gap2	ATCEA4 C80106 _1	97							
148592	ATU010 532	ATL8C3 7755:1 56..37 0	gap2	ATCEA4 S25906	97							
148593	ATU010 533	ATL8C3 4717:1 600..1 394	gap2	ATCEA4 S2439	97							
148594	ATU010 534	ATL8C4 4867:1 441..5 62	gap2	ATCEA4 C43734 _1	97							
148595	ATU010 535	ATL8C1 5185:8 63..93 6	gap2	ATCEA4 S30541	97							
148596	ATU010 536	ATL8C1 5186:1 082..1 257	gap2	ATCEA4 S16205	97							
148597	ATU010 537	ATL8C1 5227:2 298..1 872	gap2	ATCEA4 S3087	97							
148598	ATU010 538	ATL8C1 3780:1 349..1 218	gap2	ATCEA4 C9954_ 1	97							
148599	ATU010	ATL8C1	gap2	ATCEA4	97							

	539	8915:955..812		C32192_1								
148600	ATU010540	ATL8C27733:2572..3181	gap2	ATCEA4C5385_1, ATCEA4S2695	97, 82							
148601	ATU010541	ATL8C14265:511..715	gap2	ATCEA4C6151_1	97							
148602	ATU010542	ATL8S17661:82..372	gap2	ATCEA4S12978	97							
148603	ATU010543	ATL8C31190:2600..1533	gap2	ATCEA4C65641_1, ATCEA4C12250_2, ATCEA4S13260	97, 93, 84							
148604	ATU010544	ATL8C1529:80..1	gap2	ATCEA4S31443	97							
148605	ATU010545	ATL8C15363:1..958	gap2	ATCEA4C29864_1	97							
148606	ATU010546	ATL8C31042:383..713	gap2	ATCEA4S2756	97							
148607	ATU010547	ATL8C15368:1072..1420	gap2	ATCEA4C107611_1	97							
148608	ATU010548	ATL8C39810:853..945	gap2	ATCEA4C14140_1	97							
148609	ATU010549	ATL8S13467:548..36	gap2	ATCEA4C20533_1	97							

		9										
148610	ATU010550	ATL8C16648:750..1	gap2	ATCEA4S12071, ATCEA4C121445_1	97, 97							
148611	ATU010551	ATL8S19608:400..541	gap2	ATCEA4C24689_1, ATCEA4S30840	97, 96							
148612	ATU010552	ATL8C39985:218..7	gap2	ATCEA4S31577	97							
148613	ATU010553	ATL8S17262:301..1	gap2	ATCEA4S12396	97							
148614	ATU010554	ATL8C23891:1..573	gap2	ATCEA4C82043_2, ATCEA4S13634, ATCEA4S34975, ATCEA4S15685	97, 94, 91, 84							
148615	ATU010555	ATL8C44008:300..381	gap2	ATCEA4S35628, ATCEA4C239151	97, 96							
148616	ATU010556	ATL8S11301:1..92	gap2	ATCEA4C152631	97							
148617	ATU010557	ATL8C23871:5785..6573	gap2	ATCEA4S2698, ATCEA4S8364	97, 89							
148618	ATU010558	ATL8C31116:5	gap2	ATCEA4S1697	97							

		77..48										
148619	ATU010559	ATL8C1550:926..105	gap2	ATCEA4C129462_1	97							
148620	ATU010560	ATL8C44773:1011..741	gap2	ATCEA4S30109	97							
148621	ATU010561	ATL8C34574:71..608	gap2	ATCEA4C95652_1	97							
148622	ATU010562	ATL8C15699:1..242	gap2	ATCEA4C89169_1	97							
148623	ATU010563	ATL8C15725:16..405	gap2	ATCEA4C105634_1	97							
148624	ATU010564	ATL8C24652:364..1	gap2	ATCEA4C78677_1, ATCEA4S26842	97, 90							
148625	ATU010565	ATL8C46754:5053..5118	gap2	ATCEA4C102572_1	97							
148626	ATU010566	ATL8C15597:2605..3622	gap2	ATCEA4C50248_1	97							
148627	ATU010567	ATL8S26381:89..443	gap2	ATCEA4C15143_1	97							
148628	ATU010568	ATL8C34562:1711..2350	gap2	ATCEA4C40610_1	97							
148629	ATU010569	ATL8S16953:1..398	gap2	ATCEA4S3588	97							
148630	ATU010570	ATL8C12322:1767..1382	gap2	ATCEA4S14785	97							

148631	ATU010571	ATL8C31865:673..254	gap2	ATCEA4S15698	97							
148632	ATU010572	ATL8S20898:30..444	gap2	ATCEA4C48549_1, ATCEA4S8431	97, 89							
148633	ATU010573	ATL8C44714:237..1	gap2	ATCEA4S20147	97							
148634	ATU010574	ATL8C4470:1..380	gap2	ATCEA4S16189	97							
148635	ATU010575	ATL8C31383:4632..5031	gap2	ATCEA4S5665	97							
148636	ATU010576	ATL8C35791:689..1237	gap2	ATCEA4C22280_1, ATCEA4S35737, ATCEA4S32786, ATCEA4S32741	97, 91, 88, 85							
148637	ATU010577	ATL8C44672:399..1	gap2	ATCEA4C87291_1	97							
148638	ATU010578	ATL8C15705:1367..1802	gap2	ATCEA4C22928_1	97							
148639	ATU010579	ATL8S20686:1..657	gap2	ATCEA4C46515_1	97							
148640	ATU010580	ATL8C3139:788..263	gap2	ATCEA4C116222 1	97							
148641	ATU010	ATL8C3	gap2	ATCEA4	97,							

	581	1269:657..159		S35364, ATCEA4S27293, ATCEA4S27292, ATCEA4S5667	89, 86, 85							
148642	ATU010582	ATL8S16726:414..187	gap2	ATCEA4S4191	97							
148643	ATU010583	ATL8C34342:1914..2048	gap2	ATCEA4C2534_1, ATCEA4S12512	97, 90							
148644	ATU010584	ATL8S16626:7..468	gap2	ATCEA4S175	97							
148645	ATU010585	ATL8C35604:1026..1371	gap2	ATCEA4C76374_1	97							
148646	ATU010586	ATL8C25792:1645..2082	gap2	ATCEA4S36045	97							
148647	ATU010587	ATL8S16548:522..346	gap2	ATCEA4S1959	97							
148648	ATU010588	ATL8C48984:175..1	gap2	ATCEA4S30063	97							
148649	ATU010589	ATL8C25791:2860..2553	gap2	ATCEA4C86868_1	97							
148650	ATU010590	ATL8C15808:1122..7	gap2	ATCEA4S34598	97							

		99										
148651	ATU010591	ATL8C40837:509..705	gap2	ATCEA4C82294_1	97							
148652	ATU010592	ATL8C39864:725..202	gap2	ATCEA4C2081_1	97							
148653	ATU010593	ATL8C35841:985..1	gap2	ATCEA4S5198, ATCEA4C2301_1, ATCEA4S5202, ATCEA4S12803	97, 95, 90, 82							
148654	ATU010594	ATL8C15859:2685..2387	gap2	ATCEA4S30619	97							
148655	ATU010595	ATL8C32428:354..1	gap2	ATCEA4C134494_1	97							
148656	ATU010596	ATL8S16285:460..119	gap2	ATCEA4S34852	97							
148657	ATU010597	ATL8C41906:1..490	gap2	ATCEA4C9611_1	97							
148658	ATU010598	ATL8C18743:1984..1753	gap2	ATCEA4C29933_1	97							
148659	ATU010599	ATL8C6489:1316..921	gap2	ATCEA4C17901_1, ATCEA4S27092	97, 83							
148660	ATU010600	ATL8S16219:1..453	gap2	ATCEA4S10478	97							

148661	ATU010601	ATL8C35862:123..626	gap2	ATCEA4C16252_1	97							
148662	ATU010602	ATL8C41890:1..78	gap2	ATCEA4S12264	97							
148663	ATU010603	ATL8C44815:671..22	gap2	ATCEA4S11306, ATCEA4S114	97, 95							
148664	ATU010604	ATL8S1195:107..1	gap2	ATCEA4C3100_1	97							
148665	ATU010605	ATL8C26632:838..604	gap2	ATCEA4C43636_1	97							
148666	ATU010606	ATL8S15998:559..221	gap2	ATCEA4C7330_1	97							
148667	ATU010607	ATL8C25828:662..1	gap2	ATCEA4C385_1, ATCEA4S29351, ATCEA4S21396, ATCEA4S35421	97, 96, 89, 82							
148668	ATU010608	ATL8C1066:195..1	gap2	ATCEA4C129_2, ATCEA4S29815, ATCEA4S31891	97, 95, 91							
148669	ATU010609	ATL8C3133:88	gap2	ATCEA4C13882	97							

		1..1089		_1								
148670	ATU010610	ATL8C328:1548..1359	gap2	ATCEA4C17954_1	97							
148671	ATU010611	ATL8C16021:106..1	gap2	ATCEA4S30506	97							
148672	ATU010612	ATL8C43602:90..1	gap2	ATCEA4C11142_1	97							
148673	ATU010613	ATL8C16021:3217..3069	gap2	ATCEA4C13618_1	97							
148674	ATU010614	ATL8C31680:237..599	gap2	ATCEA4S26330	97							
148675	ATU010615	ATL8C16114:1069..1281	gap2	ATCEA4S36254	97							
148676	ATU010616	ATL8C25727:689..21	gap2	ATCEA4S13336	97							
148677	ATU010617	ATL8C12228:1..232	gap2	ATCEA4C535_1	97							
148678	ATU010618	ATL8C25678:1747..2217	gap2	ATCEA4C10699_1	97							
148679	ATU010619	ATL8C18674:1..144	gap2	ATCEA4S11134	97							
148680	ATU010620	ATL8C10429:2449..2030	gap2	ATCEA4C107146_1	97							
148681	ATU010621	ATL8C16182:415..84	gap2	ATCEA4C7273_1	97							

		4										
148682	ATU010622	ATL8C44253:13..504	gap2	ATCEA4S11089	97							
148683	ATU010623	ATL8C16199:573..670	gap2	ATCEA4S27937	97							
148684	ATU010624	ATL8C6463:1057..612	gap2	ATCEA4C64428_1	97							
148685	ATU010625	ATL8S15367:417..255	gap2	ATCEA4C1810_1	97							
148686	ATU010626	ATL8S24715:1..324	gap2	ATCEA4C79004_1	97							
148687	ATU010627	ATL8C44523:3731..4024	gap2	ATCEA4C688_1	97							
148688	ATU010628	ATL8C45485:407..22	gap2	ATCEA4S21531,ATCEA4S25867	97, 89							
148689	ATU010629	ATL8S15142:549..440	gap2	ATCEA4C35459_1	97							
148690	ATU010630	ATL8C37837:2378..2729	gap2	ATCEA4S2342	97							
148691	ATU010631	ATL8C25651:500..591	gap2	ATCEA4S1562	97							
148692	ATU010632	ATL8C16209:971..857	gap2	ATCEA4C90291_2	97							

148693	ATU0106 33	ATL8C23651:80..606	gap2	ATCEA4C5739_2	97							
148694	ATU0106 34	ATL8S30291:551..1311	gap2	ATCEA4C23527_1, ATCEA4S16142	97, 85							
148695	ATU0106 35	ATL8C25591:1171..1830	gap2	ATCEA4C122486_1	97							
148696	ATU0106 36	ATL8C36314:129..1	gap2	ATCEA4C21887_1	97							
148697	ATU0106 37	ATL8S30598:605..1	gap2	ATCEA4C49175_1	97							
148698	ATU0106 38	ATL8C34380:1369..1717	gap2	ATCEA4S8370, ATCEA4S7271	97, 96							
148699	ATU0106 39	ATL8C34918:535..201	gap2	ATCEA4S12859	97							
148700	ATU0106 40	ATL8S1952:220..430	gap2	ATCEA4C34667_1, ATCEA4S3178, ATCEA4C24554_1	97, 90, 86							
148701	ATU0106 41	ATL8C4937:2245..1239	gap2	ATCEA4C65631_2, ATCEA4C65631_1	97, 95							
148702	ATU0106 42	ATL8C16257:1244..1527	gap2	ATCEA4S1904	97							

148703	ATU010643	ATL8C36341:7708..8178	gap2	ATCEA4S2866	97							
148704	ATU010644	ATL8C16289:1..312	gap2	ATCEA4C92419_1	97							
148705	ATU010645	ATL8C14156:379..828	gap2	ATCEA4S27472	97							
148706	ATU010646	ATL8C36165:199..574	gap2	ATCEA4S3467	97							
148707	ATU010647	ATL8C6341:235..1	gap2	ATCEA4C22126_1	97							
148708	ATU010648	ATL8C16383:789..300	gap2	ATCEA4S33985	97							
148709	ATU010649	ATL8C16476:1024..1260	gap2	ATCEA4C139404_1	97							
148710	ATU010650	ATL8C19116:388..612	gap2	ATCEA4C12809_1, ATCEA4S16125	97, 85							
148711	ATU010651	ATL8C17141:1976..1137	gap2	ATCEA4C31095_1, ATCEA4S13973	97, 96							
148712	ATU010652	ATL8C25584:1558..2022	gap2	ATCEA4S3180	97							
148713	ATU010653	ATL8S14143:728..506	gap2	ATCEA4S32162	97							

148714	ATU010654	ATL8C25563:134..571	gap2	ATCEA4C10482_1	97							
148715	ATU010655	ATL8C4904:462..907	gap2	ATCEA4C11893_1	97							
148716	ATU010656	ATL8C32029:490..249	gap2	ATCEA4S31602	97							
148717	ATU010657	ATL8S14087:242..43	gap2	ATCEA4S1265	97							
148718	ATU010658	ATL8C16581:718..1129	gap2	ATCEA4C85569_1	97							
148719	ATU010659	ATL8C17117:1821..1415	gap2	ATCEA4S6985, ATCEA4S6986	97, 82							
148720	ATU010660	ATL8C35122:1121..1420	gap2	ATCEA4C21282_1	97							
148721	ATU010661	ATL8C33188:1017..178	gap2	ATCEA4C122457_1, ATCEA4C24219_1	97, 83							
148722	ATU010662	ATL8S13867:359..621	gap2	ATCEA4S27066	97							
148723	ATU010663	ATL8S6458:528..219	gap2	ATCEA4C11379_1	97							
148724	ATU010664	ATL8C16593:638..1	gap2	ATCEA4C127867_1	97							
148725	ATU010665	ATL8C17393:1	gap2	ATCEA4C840_1	97							

		98..719										
148726	ATU010666	ATL8C40231:1..466	gap2	ATCEA4C18509_1, ATCEA4C98145_1	97, 96							
148727	ATU010667	ATL8C20029:866..665	gap2	ATCEA4C17626_1	97							
148728	ATU010668	ATL8S3011:426..624	gap2	ATCEA4C17227_1, ATCEA4C17227_2	97, 94							
148729	ATU010669	ATL8C41309:244..1	gap2	ATCEA4C20298_1, ATCEA4S7658	97, 91							
148730	ATU010670	ATL8S9921:156..239	gap2	ATCEA4C30093_1	97							
148731	ATU010671	ATL8C36637:236..1	gap2	ATCEA4C24006_3	97							
148732	ATU010672	ATL8C16651:185..1	gap2	ATCEA4S5238	97							
148733	ATU010673	ATL8C44037:884..584	gap2	ATCEA4S2509	97							
148734	ATU010674	ATL8C4906:425..553	gap2	ATCEA4C33196_1	97							
148735	ATU010675	ATL8C10687:2445..2066	gap2	ATCEA4S17572, ATCEA4C87462	97, 86							

				1								
148736	ATU010676	ATL8S12635:1..519	gap2	ATCEA4C4140_1, ATCEA4S34602, ATCEA4C4140_5, ATCEA4S32822	97, 96, 95, 86							
148737	ATU010677	ATL8C1750:242..592	gap2	ATCEA4C19023_1	97							
148738	ATU010678	ATL8C10690:2601..6767	gap2	ATCEA4S17836	96			g4056437	100	1201	9.7e-84	(AC005990) Strong similarity to PFAM PF|00069 Eukaryotic protein kinase domain. [Arabidopsis thaliana]
148739	ATU010679	ATL8C16659:1546..1259	gap2	ATCEA4S26165	97							
148740	ATU010680	ATL8C47024:579..446	gap2	ATCEA4C107496_1	97							
148741	ATU010	ATL8C4	gap2	ATCEA4	97							

	681	4037:239..1		S2161								
148742	ATU010682	ATL8C13011:419..656	gap2	ATCEA4C131318_1	97							
148743	ATU010683	ATL8C14798:4149..5573	gap2	ATCEA4C2376_1, ATCEA4C2376_4, ATCEA4S12473, ATCEA4S21406, ATCEA4C2376_2, ATCEA4S12935	97, 93, 91, 87, 87, 83							
148744	ATU010684	ATL8S135:1..241	gap2	ATCEA4S1135	97							
148745	ATU010685	ATL8C45024:4097..2128	gap2	ATCEA4C514_1, ATCEA4S15626, ATCEA4S35933, ATCEA4S34858, ATCEA4S5221	97, 97, 92, 86, 84							
148746	ATU010686	ATL8S13415:644..550	gap2	ATCEA4S33308	97							

148747	ATU010687	ATL8C46105:169..492	gap2	ATCEA4C12141_1	97							
148748	ATU010688	ATL8C5293:663..514	gap2	ATCEA4C50402_1	97							
148749	ATU010689	ATL8C28025:596..1	gap2	ATCEA4C1628_1, ATCEA4C1628_2	97, 84							
148750	ATU010690	ATL8C16692:518..242	gap2	ATCEA4C50476_1	97							
148751	ATU010691	ATL8C32033:1..271	gap2	ATCEA4C128903_1	97							
148752	ATU010692	ATL8C32058:128..462	gap2	ATCEA4S31570	97							
148753	ATU010693	ATL8C7416:1..614	gap2	ATCEA4C5862_1, ATCEA4C4055_1	97, 84							
148754	ATU010694	ATL8C47215:933..551	gap2	ATCEA4C21968_1	97							
148755	ATU010695	ATL8C13646:676..274	gap2	ATCEA4C87178_1, ATCEA4C8824_1	97, 96							
148756	ATU010696	ATL8C3615:373..754	gap2	ATCEA4C83668_1	97							
148757	ATU010	ATL8C2	gap2	ATCEA4	97, 96							

	697	7662:1457..1779		S35391, ATCEA4S13227								
148758	ATU010698	ATL8C7955:3704..4086	gap2	ATCEA4C21968_1	97							
148759	ATU010699	ATL8C43923:555..1	gap2	ATCEA4C7001_1	97							
148760	ATU010700	ATL8S1572:1..567	gap2	ATCEA4C527_1	97							
148761	ATU010701	ATL8C34982:360..1	gap2	ATCEA4S4921	97							
148762	ATU010702	ATL8C6187:1..395	gap2	ATCEA4C472_1	97							
148763	ATU010703	ATL8C42139:939..1	gap2	ATCEA4C1994_1	97							
148764	ATU010704	ATL8C13028:1585..2035	gap2	ATCEA4S4426	97							
148765	ATU010705	ATL8C25544:571..234	gap2	ATCEA4C1436_1	97							
148766	ATU010706	ATL8S13084:599..232	gap2	ATCEA4S11981	97							
148767	ATU010707	ATL8C16920:95..1	gap2	ATCEA4C5007_1	97							
148768	ATU010708	ATL8C36149:1583..1784	gap2	ATCEA4S7831	97							
148769	ATU010709	ATL8C17017:1	gap2	ATCEA4C15113	96, 95, 95			g2827649	100	155	1.4e-11	(AL021637)

		916..3393		6_1, ATCEA4S6690, ATCEA4S34026								putative protein [Arabidopsis thaliana]
148770	ATU010710	ATL8C45349:631..1008	gap2	ATCEA4C5653_1	97							
148771	ATU010711	ATL8C32084:1..262	gap2	ATCEA4C74638_1	97							
148772	ATU010712	ATL8C35011:1..306	gap2	ATCEA4C4723_1	97							
148773	ATU010713	ATL8C16956:1195..300	gap2	ATCEA4C2288_1	97							
148774	ATU010714	ATL8C27787:1771..1498	gap2	ATCEA4C117215_1, ATCEA4S33236	97, 94							
148775	ATU010715	ATL8C1891:301..1	gap2	ATCEA4C121574_1	97							
148776	ATU010716	ATL8C25758:1869..1613	gap2	ATCEA4C138391_2, ATCEA4C138391_1	97, 92							
148777	ATU010717	ATL8C34894:118..452	gap2	ATCEA4C24343_1	97							
148778	ATU010718	ATL8C48017:3021..2471	gap2	ATCEA4C14034_3, ATCEA4	97, 95, 88							

				C14034_5, ATCEA4S33638								
148779	ATU010719	ATL8C10039:175..390	gap2	ATCEA4S34228	97							
148780	ATU010720	ATL8C6077:1459..1075	gap2	ATCEA4C33939_1, ATCEA4S25331	97, 91							
148781	ATU010721	ATL8C49391:1531..544	gap2	ATCEA4C203_1	97							
148782	ATU010722	ATL8C8036:1550..551	gap2	ATCEA4C1859_1, ATCEA4S32852	97, 94							
148783	ATU010723	ATL8C36912:562..1	gap2	ATCEA4S32000	97							
148784	ATU010724	ATL8C32135:228..1	gap2	ATCEA4S30437	97							
148785	ATU010725	ATL8C9494:311..1	gap2	ATCEA4C44198_1	97							
148786	ATU010726	ATL8C13211:224..1	gap2	ATCEA4S26152	97							
148787	ATU010727	ATL8C32150:700..543	gap2	ATCEA4S3805	97							
148788	ATU010728	ATL8C23295:1..885	gap2	ATCEA4C1584_2, ATCEA4S11355,	97, 97, 90, 87							

				ATCEA4S25044, ATCEA4S32802								
148789	ATU010729	ATL8S12578:398..171	gap2	ATCEA4C12388_1	97							
148790	ATU010730	ATL8C39458:100..1	gap2	ATCEA4C144561_1	97							
148791	ATU010731	ATL8C10069:1831..1496	gap2	ATCEA4S4684	97							
148792	ATU010732	ATL8C17106:2217..2655	gap2	ATCEA4S4066	97							
148793	ATU010733	ATL8C1490:1163..195	gap2	ATCEA4C9807_1, ATCEA4S19017	97, 83							
148794	ATU010734	ATL8C43662:590..988	gap2	ATCEA4S26339	97							
148795	ATU010735	ATL8C1714:215..77	gap2	ATCEA4S1746	97							
148796	ATU010736	ATL8C17153:228..1	gap2	ATCEA4C91940_1	97							
148797	ATU010737	ATL8C43614:819..379	gap2	ATCEA4C31409_1	97							
148798	ATU010738	ATL8C10086:748..817	gap2	ATCEA4C120969_1	97							
148799	ATU010	ATL8S8	gap2	ATCEA4	97, 95							

	739	355:22 0..1		C23611 _1, ATCEA4 S5078								
148800	ATU010 740	ATL8C4 9146:1 ..233	gap2	ATCEA4 S30691	97							
148801	ATU010 741	ATL8C1 5984:7 11..1	gap2	ATCEA4 C1486_ 1	97							
148802	ATU010 742	ATL8C4 3521:1 ..908	gap2	ATCEA4 C11488 _1	97							
148803	ATU010 743	ATL8S2 4122:5 86..28 4	gap2	ATCEA4 C3942_ 1	97							
148804	ATU010 744	ATL8S1 2459:3 80..1	gap2	ATCEA4 C11747 8_1	97							
148805	ATU010 745	ATL8C4 0163:1 855..1 440	gap2	ATCEA4 S6197	97							
148806	ATU010 746	ATL8S2 0998:5 69..1	gap2	ATCEA4 C63784 _1, ATCEA4 S30172 , ATCEA4 C63784 _2	97, 97, 96							
148807	ATU010 747	ATL8C3 5046:1 ..117	gap2	ATCEA4 S1763	97							
148808	ATU010 748	ATL8C2 1686:1 504..2 089	gap2	ATCEA4 C67563 _1, ATCEA4 S31871	97, 96							
148809	ATU010 749	ATL8C1 2452:2 12..71	gap2	ATCEA4 S14223	97							

		2										
148810	ATU010750	ATL8C17280:89..1	gap2	ATCEA4C708_2	97							
148811	ATU010751	ATL8C36948:11338..1628	gap2	ATCEA4S1573	97							
148812	ATU010752	ATL8C1495:910..1349	gap2	ATCEA4S23344, ATCEA4S14848	97, 93							
148813	ATU010753	ATL8C43396:698..1036	gap2	ATCEA4S15572, ATCEA4C83104_1	97, 96							
148814	ATU010754	ATL8C47050:203..1	gap2	ATCEA4C48910_1	97							
148815	ATU010755	ATL8S30837:485..1	gap2	ATCEA4C671_1, ATCEA4C4956_1	97, 84							
148816	ATU010756	ATL8C43162:592..312	gap2	ATCEA4C953_1	97							
148817	ATU010757	ATL8C416:85..1	gap2	ATCEA4C3832_1	97							
148818	ATU010758	ATL8C25525:385..739	gap2	ATCEA4C120910_1	97							
148819	ATU010759	ATL8C16956:1..103	gap2	ATCEA4S25229, ATCEA4S25233	97, 91							

148820	ATU0107 60	ATL8C17298:1..284	gap2	ATCEA4S25042	97							
148821	ATU0107 61	ATL8C26419:641..877	gap2	ATCEA4C44283_1	97							
148822	ATU0107 62	ATL8C43310:263..893	gap2	ATCEA4S14587	97							
148823	ATU0107 63	ATL8C10895:590..1	gap2	ATCEA4S541, ATCEA4S30928	97, 94							
148824	ATU0107 64	ATL8S26639:1..286	gap2	ATCEA4C1889_4, ATCEA4S27447, ATCEA4C1889_9, ATCEA4S10385, ATCEA4S34586	97, 97, 96, 91, 89							
148825	ATU0107 65	ATL8C8122:533..990	gap2	ATCEA4C12984_2, ATCEA4S35650, ATCEA4S35801, ATCEA4S7406	97, 95, 84, 84							
148826	ATU0107 66	ATL8C41619:2186..2053	gap2	ATCEA4C11926_1	97							

148827	ATU010767	ATL8C32229:5048..5456	gap2	ATCEA4S5999	97							
148828	ATU010768	ATL8C10156:445..1	gap2	ATCEA4C105517_1	97							
148829	ATU010769	ATL8C43195:135..453	gap2	ATCEA4C120920_1	97							
148830	ATU010770	ATL8C28651:105..1057	gap2	ATCEA4C127577_1	96	ATL8C28651:408..747	1.00	g1532175	99	421	6.1e-20	(U63815) similar to protein disulfide isomerase [Arabidopsis thaliana]
148831	ATU010771	ATL8C17583:548..1	gap2	ATCEA4C116984_1	97							
148832	ATU010772	ATL8C15616:2637..3258	gap2	ATCEA4C21490_1, ATCEA4S34921, ATCEA4C21490_2	97, 89, 88							
148833	ATU010773	ATL8S11582:591..194	gap2	ATCEA4S12926	97							
148834	ATU010774	ATL8C17596:2706..3	gap2	ATCEA4C18609_1	97							

		184										
148835	ATU010775	ATL8C26077:172..787	gap2	ATCEA4C72919_1, ATCEA4S26013	97, 96							
148836	ATU010776	ATL8C37946:1825..2120	gap2	ATCEA4S13946	97							
148837	ATU010777	ATL8C17666:2117..2461	gap2	ATCEA4C35124_1	97							
148838	ATU010778	ATL8C35067:2227..1859	gap2	ATCEA4S12991	97							
148839	ATU010779	ATL8C17681:1872..1565	gap2	ATCEA4S476	97							
148840	ATU010780	ATL8C17738:1231..954	gap2	ATCEA4S30136	97							
148841	ATU010781	ATL8C40131:752..997	gap2	ATCEA4C19092_1	97							
148842	ATU010782	ATL8C3719:2191..1879	gap2	ATCEA4S1119	97							
148843	ATU010783	ATL8S29228:633..1	gap2	ATCEA4C30484_1, ATCEA4C30484_2, ATCEA4S6970	97, 86, 85							
148844	ATU010784	ATL8C17789:2	gap2	ATCEA4S26221	97							

		954..3094										
148845	ATU0107 85	ATL8C10955:338..1	gap2	ATCEA4C4024_1	97							
148846	ATU0107 86	ATL8C17870:1224..1062	gap2	ATCEA4S33016	97							
148847	ATU0107 87	ATL8C37258:162..528	gap2	ATCEA4S25859	97							
148848	ATU0107 88	ATL8C14011:821..1160	gap2	ATCEA4S26448	97							
148849	ATU0107 89	ATL8S11285:192..1	gap2	ATCEA4S29618	97							
148850	ATU0107 90	ATL8C49241:538..879	gap2	ATCEA4S912	97							
148851	ATU0107 91	ATL8C42872:186..599	gap2	ATCEA4S4573	97							
148852	ATU0107 92	ATL8C42871:1..147	gap2	ATCEA4S33579, ATCEA4S33569	97, 94							
148853	ATU0107 93	ATL8C32719:458..1	gap2	ATCEA4C14283_1, ATCEA4S6409	97, 82							
148854	ATU0107 94	ATL8C24405:847..1	gap2	ATCEA4C2107_1, ATCEA4C2107_2,	97, 97, 93, 89, 87							

				ATCEA4S7171, ATCEA4C2107_3, ATCEA4S31648								
148855	ATU010795	ATL8C42807:3473..3296	gap2	ATCEA4S26759	97							
148856	ATU010796	ATL8C23021:107..550	gap2	ATCEA4C117488_1	97							
148857	ATU010797	ATL8S11250:403..90	gap2	ATCEA4S18	97							
148858	ATU010798	ATL8C17907:119..189	gap2	ATCEA4S29569	97							
148859	ATU010799	ATL8C2302:714..1375	gap2	ATCEA4S3405, ATCEA4C34788_1	97, 94							
148860	ATU010800	ATL8C37281:1..148	gap2	ATCEA4S1799	97							
148861	ATU010801	ATL8S26199:1..124	gap2	ATCEA4C2107_1, ATCEA4C2107_3, ATCEA4C2107_2	97, 97, 96							
148862	ATU010802	ATL8C17911:644..931	gap2	ATCEA4C29919_1	97							
148863	ATU010	ATL8C4	gap2	ATCEA4	97							

	803	0943:543..842		C9281_1								
148864	ATU010804	ATL8C42755:788..237	gap2	ATCEA4C7186_1	97							
148865	ATU010805	ATL8C2066:516..171	gap2	ATCEA4C107808_2	97							
148866	ATU010806	ATL8C10288:60..280	gap2	ATCEA4S32973	97							
148867	ATU010807	ATL8C37285:481..1	gap2	ATCEA4S28374	97							
148868	ATU010808	ATL8C17946:698..940	gap2	ATCEA4S2924	97							
148869	ATU010809	ATL8C5867:1125..1	gap2	ATCEA4S19858, ATCEA4C76960_1, ATCEA4S30941, ATCEA4S34458	97, 97, 91, 86							
148870	ATU010810	ATL8C45301:869..1	gap2	ATCEA4C2266_1, ATCEA4S1757	97, 95							
148871	ATU010811	ATL8C17973:986..849	gap2	ATCEA4S36304	97							
148872	ATU010812	ATL8C16463:776..289	gap2	ATCEA4C20239_1	97							

148873	ATU010813	ATL8C37306:332..935	gap2	ATCEA4S367, ATCEA4C4253_1	97, 96							
148874	ATU010814	ATL8C49249:401..1061	gap2	ATCEA4C50058_1	97							
148875	ATU010815	ATL8C38019:1728..1556	gap2	ATCEA4S26615	97							
148876	ATU010816	ATL8S19927:1..514	gap2	ATCEA4C11682_1	97							
148877	ATU010817	ATL8C19125:179..697	gap2	ATCEA4S16151, ATCEA4C33551_1	97, 96							
148878	ATU010818	ATL8C35467:806..1178	gap2	ATCEA4S12205	97							
148879	ATU010819	ATL8C36423:650..254	gap2	ATCEA4C103097_1	97							
148880	ATU010820	ATL8S10931:601..523	gap2	ATCEA4S12423	97							
148881	ATU010821	ATL8S1737:305..1	gap2	ATCEA4C5744_1	97							
148882	ATU010822	ATL8C32297:1250..850	gap2	ATCEA4S1525	97							
148883	ATU010823	ATL8C18039:432..16	gap2	ATCEA4S1982	97							

		8										
148884	ATU010824	ATL8C36083:1233..971	gap2	ATCEA4S5185	97							
148885	ATU010825	ATL8C33922:989..30	gap2	ATCEA4C89288_1, ATCEA4C39625_1	97, 90							
148886	ATU010826	ATL8C36469:446..739	gap2	ATCEA4C28257_1, ATCEA4S9509	97, 82							
148887	ATU010827	ATL8C12809:2246..2395	gap2	ATCEA4C9647_1	97							
148888	ATU010828	ATL8C365:359..1740	gap2	ATCEA4C12376_1, ATCEA4S18109	97, 84							
148889	ATU010829	ATL8C18064:1450..1743	gap2	ATCEA4S30486	97							
148890	ATU010830	ATL8C13124:1743..1989	gap2	ATCEA4S31578	97							
148891	ATU010831	ATL8C18126:786..219	gap2	ATCEA4C45219_1	97							
148892	ATU010832	ATL8C18203:1392..1260	gap2	ATCEA4S33401	97							
148893	ATU010833	ATL8C4243:957..418	gap2	ATCEA4S14649	97							

148894	ATU010834	ATL8C35850:1103..1235	gap2	ATCEA4S23440	97							
148895	ATU010835	ATL8C36078:1..283	gap2	ATCEA4C28380_1	97							
148896	ATU010836	ATL8C42412:299..1	gap2	ATCEA4S30879	97							
148897	ATU010837	ATL8C17288:139..845	gap2	ATCEA4S1233, ATCEA4S33316	97, 96							
148898	ATU010838	ATL8C42403:3793..3513	gap2	ATCEA4S344	97							
148899	ATU010839	ATL8C42401:1..283	gap2	ATCEA4C96320_1	97							
148900	ATU010840	ATL8S5174:399..1	gap2	ATCEA4S3565, ATCEA4S786	97, 83							
148901	ATU010841	ATL8C8307:932..1	gap2	ATCEA4C34738_1	96			g4100433	100	585	6.1e-59	(AF000378) beta-glucosidase [Glycine max]
148902	ATU010842	ATL8C13962:4380..4243	gap2	ATCEA4S253	97							
148903	ATU010843	ATL8C46643:3031..4116	gap2	ATCEA4C4326_1, ATCEA4S12127	96, 84			g2979555	100	261	6.9e-25	(AC003680) unknown protein [Arabi

												dopsis thaliana]
148904	ATU010844	ATL8C41796:3545..1627	gap2	ATCEA4S27401	96			g4309868	100	2510	5.0e-198	(AC006527) putative retrotransposon-like orf [Arabidopsis thaliana]
148905	ATU010845	ATL8C18348:1686..1223	gap2	ATCEA4C29198_1	97							
148906	ATU010846	ATL8C1521:640..362	gap2	ATCEA4C44158_1	97							
148907	ATU010847	ATL8C398:795..71	gap2	ATCEA4C49248_2	97							
148908	ATU010848	ATL8C49263:1657..1054	gap2	ATCEA4C115848_1	97							
148909	ATU010849	ATL8S10477:301..556	gap2	ATCEA4S26142, ATCEA4C1375_3	97, 96							
148910	ATU010850	ATL8C10475:4354..4888	gap2	ATCEA4C80484_1	97							
148911	ATU010851	ATL8C41676:67..515	gap2	ATCEA4S3495	97							
148912	ATU010	ATL8C4	gap2	ATCEA4	97							

	852	008:259..1		S30109								
148913	ATU010853	ATL8C36012:245..571	gap2	ATCEA4C6609_1	97							
148914	ATU010854	ATL8C36004:569..1011	gap2	ATCEA4C12356_1	97							
148915	ATU010855	ATL8C18443:1..121	gap2	ATCEA4S4694	97							
148916	ATU010856	ATL8C29731:245..638	gap2	ATCEA4S34084, ATCEA4S31319	97, 92							
148917	ATU010857	ATL8C8383:1..329	gap2	ATCEA4C116708_2, ATCEA4S31172	97, 86							
148918	ATU010858	ATL8C5673:1..208	gap2	ATCEA4C33700_1, ATCEA4S9435	97, 82							
148919	ATU010859	ATL8C42241:1090..1359	gap2	ATCEA4S7966	97							
148920	ATU010860	ATL8C40023:1065..614	gap2	ATCEA4S3221	97							
148921	ATU010861	ATL8C42224:307..1	gap2	ATCEA4C77344_1	97							
148922	ATU010862	ATL8C37525:655..258	gap2	ATCEA4S27300	97							
148923	ATU010	ATL8C1	gap2	ATCEA4	97							

	863	8462:1..105		C70921_1								
148924	ATU010864	ATL8C33673:1258..916	gap2	ATCEA4S12897	97							
148925	ATU010865	ATL8C8043:1..1176	gap2	ATCEA4C75703_1, ATCEA4S20646, ATCEA4S24110, ATCEA4C46696_1	97, 91, 91, 89							
148926	ATU010866	ATL8C4321:215..1	gap2	ATCEA4C2200_1	97							
148927	ATU010867	ATL8C40125:634..933	gap2	ATCEA4C114749_1	97							
148928	ATU010868	ATL8C21795:3455..3900	gap2	ATCEA4S795, ATCEA4C7659_3, ATCEA4C7659_2	97, 95, 94							
148929	ATU010869	ATL8S1017:183..1	gap2	ATCEA4S3037	97							
148930	ATU010870	ATL8C46608:1094..691	gap2	ATCEA4C121255_1	97							
148931	ATU010871	ATL8C18556:3403..3030	gap2	ATCEA4C103667_1	97							

148932	ATU010872	ATL8C42403:1..3379	gap2	ATCEA4S178, ATCEA4S253	96, 89			g4038066, g4263658	100, 61	593, 359	2.1e-38, 3.4e-33	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AC006136) hypothetical protein [Arabidopsis thaliana]
148933	ATU010873	ATL8C15272:575..1539	gap2	ATCEA4S15769, ATCEA4C7449_2	97, 96							
148934	ATU010874	ATL8C18612:1404..1019	gap2	ATCEA4S24762	97							
148935	ATU010875	ATL8C13231:1..369	gap2	ATCEA4C1043_1, ATCEA4C1043_2	97, 96							
148936	ATU010876	ATL8C41616:301..1	gap2	ATCEA4S26869	97							
148937	ATU010877	ATL8S11189:346..749	gap2	ATCEA4C18873_1, ATCEA4C18873	97, 96							

				_2								
148938	ATU010878	ATL8C25503:836..565	gap2	ATCEA4S31569	97							
148939	ATU010879	ATL8C9948:1734..2135	gap2	ATCEA4S30337	97							
148940	ATU010880	ATL8C18677:1..169	gap2	ATCEA4S4873	97							
148941	ATU010881	ATL8C35146:1..291	gap2	ATCEA4C118834_1	97							
148942	ATU010882	ATL8C37639:1..293	gap2	ATCEA4C72674_1	97							
148943	ATU010883	ATL8C1315:1339..937	gap2	ATCEA4S4679	97							
148944	ATU010884	ATL8C32727:3492..3832	gap2	ATCEA4C30443_1, ATCEA4S2937	97, 94							
148945	ATU010885	ATL8C37685:1..324	gap2	ATCEA4C604_2, ATCEA4C604_7	97, 93							
148946	ATU010886	ATL8C9917:834..1258	gap2	ATCEA4S24859	97							
148947	ATU010887	ATL8C2277:600..1	gap2	ATCEA4C7329_1	97							
148948	ATU010888	ATL8C38070:773..1	gap2	ATCEA4C635_1, ATCEA4S15790	97, 93							

148949	ATU010889	ATL8C4192:2395..1668	gap2	ATCEA4S32847, ATCEA4S29281, ATCEA4C122834_1	97, 94, 93							
148950	ATU010890	ATL8C1877:1..448	gap2	ATCEA4C93381_1	97							
148951	ATU010891	ATL8C9849:143..1	gap2	ATCEA4S3318	97							
148952	ATU010892	ATL8C45988:1089..1745	gap2	ATCEA4C20508_1	97							
148953	ATU010893	ATL8C22756:226..345	gap2	ATCEA4C28686_1	97							
148954	ATU010894	ATL8C20592:172..1	gap2	ATCEA4C26964_1, ATCEA4S8052	97, 93							
148955	ATU010895	ATL8C8442:2527..1746	gap2	ATCEA4C1814_1, ATCEA4S28193, ATCEA4S30828	97, 96, 87							
148956	ATU010896	ATL8C25780:2322..1120	gap2	ATCEA4C30753_1, ATCEA4S7174, ATCEA4C88422_1,	96, 91, 87, 84			g134037	100	557	4.0e-19	SMALL NUCLEAR RIBONUCLEOPROTEIN ASSOCIATED

				ATCEA4C65716_1								PROTEINS B AND B' (SM-B AND SM-B') (SNRNP-B) []
148957	ATU010897	ATL8C47364:367..638	gap2	ATCEA4C1784_1	97							
148958	ATU010898	ATL8C9796:1614..2352	gap2	ATCEA4C33414_1	97							
148959	ATU010899	ATL8C26280:3675..4322	gap2	ATCEA4S11306, ATCEA4S114	97, 95							
148960	ATU010900	ATL8C9784:489..13	gap2	ATCEA4S720	97							
148961	ATU010901	ATL8S2040:100..198	gap2	ATCEA4C16628_2, ATCEA4S1789	97, 94							
148962	ATU010902	ATL8C975:629..247	gap2	ATCEA4C35045_1	97							
148963	ATU010903	ATL8C18921:363..1	gap2	ATCEA4S32625	97							
148964	ATU010904	ATL8C49311:1850..1424	gap2	ATCEA4S33685	97							
148965	ATU010905	ATL8C36757:1574..1	gap2	ATCEA4C116690_1, ATCEA4	97, 94							

				S32946								
148966	ATU010906	ATL8C11339:270..788	gap2	ATCEA4S20915, ATCEA4C7047_2, ATCEA4S5548	97, 95, 94							
148967	ATU010907	ATL8C33780:1642..2291	gap2	ATCEA4S11306, ATCEA4S114	97, 95							
148968	ATU010908	ATL8C9731:1388..932	gap2	ATCEA4C27470_1	97							
148969	ATU010909	ATL8C35515:842..1383	gap2	ATCEA4S12723, ATCEA4C3375_2, ATCEA4C3375_4, ATCEA4C3375_3	97, 94, 93, 92							
148970	ATU010910	ATL8C33652:181..552	gap2	ATCEA4S11902	97							
148971	ATU010911	ATL8C26126:488..881	gap2	ATCEA4C51109_2, ATCEA4C51109_1	97, 96							
148972	ATU010912	ATL8C22674:2370..2884	gap2	ATCEA4S1779, ATCEA4S3010	97, 93							

148973	ATU010913	ATL8C19026:221..1	gap2	ATCEA4S16009	97							
148974	ATU010914	ATL8C19086:1043..577	gap2	ATCEA4S32875	97							
148975	ATU010915	ATL8S19011:449..578	gap2	ATCEA4C467_1	97							
148976	ATU010916	ATL8C35838:1665..1766	gap2	ATCEA4S2522	97							
148977	ATU010917	ATL8C10558:1196..1634	gap2	ATCEA4C108675_1	97							
148978	ATU010918	ATL8C11328:159..588	gap2	ATCEA4C4869_2, ATCEA4S1070	97, 96							
148979	ATU010919	ATL8C45533:1..540	gap2	ATCEA4S2668, ATCEA4S15146, ATCEA4C9813_2	97, 97, 83							
148980	ATU010920	ATL8C5524:443..1909	gap2	ATCEA4C974_1, ATCEA4S17378, ATCEA4S19621	97, 85, 84							
148981	ATU010921	ATL8C37912:896..152	gap2	ATCEA4C4482_2	97							

148982	ATU010922	ATL8C32476:1849..2039	gap2	ATCEA4S11237	97							
148983	ATU010923	ATL8C25487:346..506	gap2	ATCEA4S857	97							
148984	ATU010924	ATL8C19247:666..393	gap2	ATCEA4S13855	97							
148985	ATU010925	ATL8C49821:22..438	gap2	ATCEA4C108720_1	97							
148986	ATU010926	ATL8C44155:1..286	gap2	ATCEA4S26610, ATCEA4C71861_2, ATCEA4S19194	97, 95, 87							
148987	ATU010927	ATL8S16466:402..502	gap2	ATCEA4C8486_2	97							
148988	ATU010928	ATL8C10028:305..1704	gap2	ATCEA4C4025_1, ATCEA4C4025_2	97, 89							
148989	ATU010929	ATL8C37956:637..1051	gap2	ATCEA4C45801_2, ATCEA4C45801_3	97, 91							
148990	ATU010930	ATL8C9467:1265..390	gap2	ATCEA4S36381	97							
148991	ATU010	ATL8S1	gap2	ATCEA4	97							

	931	5399:459..379		C14167_1								
148992	ATU010932	ATL8C9463:433..159	gap2	ATCEA4S1732	97							
148993	ATU010933	ATL8C12475:1571..1219	gap2	ATCEA4S12628	97							
148994	ATU010934	ATL8C30589:288..662	gap2	ATCEA4S26229, ATCEA4S16230	97, 91							
148995	ATU010935	ATL8C9438:255..798	gap2	ATCEA4C82061_3, ATCEA4S23819	97, 96							
148996	ATU010936	ATL8C33633:1..351	gap2	ATCEA4S30185	97							
148997	ATU010937	ATL8C11371:331..1	gap2	ATCEA4C13744_1	97							
148998	ATU010938	ATL8C49323:6998..7330	gap2	ATCEA4S34290	97							
148999	ATU010939	ATL8C1937:2798..2623	gap2	ATCEA4S2527	97							
149000	ATU010940	ATL8C41576:1..283	gap2	ATCEA4C96938_1	97							
149001	ATU010941	ATL8C33710:1..479	gap2	ATCEA4C86357_1, ATCEA4S27165	97, 93							
149002	ATU010942	ATL8S10865:8	gap2	ATCEA4C12023	97, 86							

		4..515		4_1, ATCEA4 S29296								
149003	ATU010 943	ATL8C3 5329:1 337..1 822	gap2	ATCEA4 S33092 , ATCEA4 C10310 2_1	97, 97							
149004	ATU010 944	ATL8C3 0644:7 64..29 82	gap2	ATCEA4 S2870	96			g26232 99	100	1553	8.2e-151	(AC002 409) hypoth etical protei n [Arabi dopsis thalia na]
149005	ATU010 945	ATL8C1 956:12 76..86 2	gap2	ATCEA4 S20159	97							
149006	ATU010 946	ATL8C1 653:49 1..112 3	gap2	ATCEA4 C65906 _2, ATCEA4 C65906 _1	97, 91							
149007	ATU010 947	ATL8C9 334:44 2..78	gap2	ATCEA4 S6128	97							
149008	ATU010 948	ATL8C1 9577:1 135..1 323	gap2	ATCEA4 C9668_ 1	97							
149009	ATU010 949	ATL8C9 313:39 4..572	gap2	ATCEA4 S13681	97							
149010	ATU010 950	ATL8C1 4597:5 63..27 6	gap2	ATCEA4 C10484 _1	97							
149011	ATU010	ATL8C3	gap2	ATCEA4	97							

	951	255:317..18		S29721								
149012	ATU010952	ATL8C10637:586..723	gap2	ATCEA4S5672	97							
149013	ATU010953	ATL8C41564:492..117	gap2	ATCEA4S12072	97							
149014	ATU010954	ATL8C33592:337..536	gap2	ATCEA4S26317	97							
149015	ATU010955	ATL8C36872:1440..1305	gap2	ATCEA4C1230_1	97							
149016	ATU010956	ATL8C9230:203..1	gap2	ATCEA4C126565_1	97							
149017	ATU010957	ATL8C19668:838..929	gap2	ATCEA4S7208	97							
149018	ATU010958	ATL8C30575:1..911	gap2	ATCEA4C60023_1	97							
149019	ATU010959	ATL8C22513:755..484	gap2	ATCEA4C28935_1	97							
149020	ATU010960	ATL8C36898:206..970	gap2	ATCEA4C22690_1	97							
149021	ATU010961	ATL8C1972:1566..1646	gap2	ATCEA4S26685	97							
149022	ATU010962	ATL8C9179:1102..870	gap2	ATCEA4S899	97							

149023	ATU010963	ATL8C9156:1456..404	gap2	ATCEA4S5522	97							
149024	ATU010964	ATL8C38147:3057..2747	gap2	ATCEA4S1296	97							
149025	ATU010965	ATL8C48031:768..64	gap2	ATCEA4C2363_1, ATCEA4S2106, ATCEA4S5247	97, 92, 83							
149026	ATU010966	ATL8C41541:1..387	gap2	ATCEA4S4474	97							
149027	ATU010967	ATL8C32632:1..327	gap2	ATCEA4S3830	97							
149028	ATU010968	ATL8S9724:1..210	gap2	ATCEA4C16166_1	97							
149029	ATU010969	ATL8C35157:209..1	gap2	ATCEA4S1075, ATCEA4S2027	97, 94							
149030	ATU010970	ATL8C9073:159..1548	gap2	ATCEA4C22746_1	97							
149031	ATU010971	ATL8C7145:792..532	gap2	ATCEA4C589_1	97							
149032	ATU010972	ATL8C2246:120..693	gap2	ATCEA4C106654_1	97							
149033	ATU010973	ATL8C11513:1..278	gap2	ATCEA4C23502_1	97							
149034	ATU010974	ATL8C2932:1487..17	gap2	ATCEA4C10058_1	97							

		85										
149035	ATU010975	ATL8C13234:1700..2069	gap2	ATCEA4C98728_1	97							
149036	ATU010976	ATL8C19852:2625..3291	gap2	ATCEA4C2450_1	97							
149037	ATU010977	ATL8C10736:536..915	gap2	ATCEA4S33440	97							
149038	ATU010978	ATL8C382:4351..3586	gap2	ATCEA4C75394_1	97							
149039	ATU010979	ATL8C8873:119..1	gap2	ATCEA4S35642	97							
149040	ATU010980	ATL8C19945:1..811	gap2	ATCEA4S793	97							
149041	ATU010981	ATL8C8860:1000..1083	gap2	ATCEA4C130267_1	97							
149042	ATU010982	ATL8C32655:1..67	gap2	ATCEA4S33339	97							
149043	ATU010983	ATL8C19967:82..1	gap2	ATCEA4C21879_1	97							
149044	ATU010984	ATL8C33663:700..2649	gap2	ATCEA4C117518_1, ATCEA4S18065	96, 92			g3219782, g3056583	100, 94	280, 433	6.6e-28, 3.0e-41	CCR4-ASSOCIATED FACTOR 1 (CAF1) [Mus musculus]; (AC004255)

												T1F9.4 [Arabidopsis thaliana]
149045	ATU010985	ATL8C12504:74..1	gap2	ATCEA4S30171	97							
149046	ATU010986	ATL8C6656:437..17	gap2	ATCEA4C73809_1	97							
149047	ATU010987	ATL8C36989:504..1174	gap2	ATCEA4S5193, ATCEA4C29794_2, ATCEA4S7551, ATCEA4S7194	97, 93, 86, 83							
149048	ATU010988	ATL8C29052:447..752	gap2	ATCEA4C24006_2, ATCEA4C24006_3, ATCEA4S22932	97, 93, 85							
149049	ATU010989	ATL8C3275:2669..1884	gap2	ATCEA4C20335_1, ATCEA4S30889	97, 90							
149050	ATU010990	ATL8C10774:896..1502	gap2	ATCEA4C116810_1	97							
149051	ATU010991	ATL8S14717:179..1	gap2	ATCEA4C41425_1	97							
149052	ATU010992	ATL8S21938:1..381	gap2	ATCEA4C112384_1, ATCEA4	97, 90							

				S33878								
149053	ATU010993	ATL8C20175:1..397	gap2	ATCEA4C111544_1	97							
149054	ATU010994	ATL8C20212:3180..2885	gap2	ATCEA4S1465	97							
149055	ATU010995	ATL8C207:2603..2991	gap2	ATCEA4S28055, ATCEA4S14895	97, 83							
149056	ATU010996	ATL8C20265:702..74	gap2	ATCEA4C46580_1	97							
149057	ATU010997	ATL8C16499:585..1189	gap2	ATCEA4S11434, ATCEA4S29813	97, 92							
149058	ATU010998	ATL8C10799:1245..998	gap2	ATCEA4S33695	97							
149059	ATU010999	ATL8S1449:546..1	gap2	ATCEA4C66335_1	97							
149060	ATU011000	ATL8C33582:1213..1539	gap2	ATCEA4S946	97							
149061	ATU011001	ATL8S8381:1..603	gap2	ATCEA4S10279, ATCEA4C60816_1	97, 82							
149062	ATU011002	ATL8C7347:86..1443	gap2	ATCEA4S6227	96			g4185144	100	596	3.5e-56	(AC005724) unknown protein

												[Arabidopsis thaliana]
149063	ATU011003	ATL8C20342:1255..304	gap2	ATCEA4C20773_1	97							
149064	ATU011004	ATL8C11650:732..8	gap2	ATCEA4S32374, ATCEA4S24594	97, 88							
149065	ATU011005	ATL8C25880:604..1	gap2	ATCEA4C612_1, ATCEA4S5750	97, 91							
149066	ATU011006	ATL8S23310:1..234	gap2	ATCEA4C2121_1	97							
149067	ATU011007	ATL8C26150:2228..2491	gap2	ATCEA4C29548_1, ATCEA4S11497	97, 88							
149068	ATU011008	ATL8S16880:1..238	gap2	ATCEA4C1602_1	97							
149069	ATU011009	ATL8C26594:1..637	gap2	ATCEA4C23748_1, ATCEA4S6270	97, 82							
149070	ATU011010	ATL8C35873:1580..1846	gap2	ATCEA4C692_1, ATCEA4S21274	97, 82							
149071	ATU011011	ATL8C11133:620..448	gap2	ATCEA4C1031_1	97							
149072	ATU011	ATL8C8	gap2	ATCEA4	97							

	012	63:1160..1245		C31574_1								
149073	ATU011013	ATL8S14318:323..1	gap2	ATCEA4S23379, ATCEA4S21072, ATCEA4S28947, ATCEA4S28935, ATCEA4S18184, ATCEA4S22404	97, 96, 93, 90, 89, 85							
149074	ATU011014	ATL8S14281:219..1	gap2	ATCEA4C102549_1, ATCEA4C102549_2	97, 97							
149075	ATU011015	ATL8C25309:1..575	gap2	ATCEA4C127986_1	97							
149076	ATU011016	ATL8S10384:462..1	gap2	ATCEA4C6836_1, ATCEA4C6836_2	97, 97							
149077	ATU011017	ATL8C8596:327..492	gap2	ATCEA4C47502_1	97							
149078	ATU011018	ATL8C20419:1139..1547	gap2	ATCEA4C15035_1	97							
149079	ATU011019	ATL8C20469:1	gap2	ATCEA4C3721	97							

		683..2213		1								
149080	ATU011020	ATL8C10370:715..197	gap2	ATCEA4C19901_1, ATCEA4S13256	97, 95							
149081	ATU011021	ATL8C43106:221..1	gap2	ATCEA4C52679_1, ATCEA4S31929	97, 91							
149082	ATU011022	ATL8C38595:550..683	gap2	ATCEA4C17465_1, ATCEA4S26199	97, 95							
149083	ATU011023	ATL8C10865:2780..2099	gap2	ATCEA4C127791_1	97							
149084	ATU011024	ATL8C26155:1381..1726	gap2	ATCEA4C42261_1, ATCEA4S4705	97, 95							
149085	ATU011025	ATL8C31038:1795..836	gap2	ATCEA4C763_1, ATCEA4S5223	97, 90							
149086	ATU011026	ATL8C32726:614..277	gap2	ATCEA4S11756	97							
149087	ATU011027	ATL8C30629:665..200	gap2	ATCEA4C1814_2	97							
149088	ATU011028	ATL8C8436:1906..1986	gap2	ATCEA4S25897	97							
149089	ATU011	ATL8C3	gap2	ATCEA4	97							

	029	8303:1756..1443		S29602								
149090	ATU011030	ATL8C35521:509..1469	gap2	ATCEA4C21326_1	97							
149091	ATU011031	ATL8C25413:769..605	gap2	ATCEA4C120276_2	97							
149092	ATU011032	ATL8C18330:1561..1818	gap2	ATCEA4C20854_1	97							
149093	ATU011033	ATL8C32736:185..563	gap2	ATCEA4S14832	97							
149094	ATU011034	ATL8C7527:1..291	gap2	ATCEA4C133196_1	97							
149095	ATU011035	ATL8C7664:389..1	gap2	ATCEA4C133196_1	97							
149096	ATU011036	ATL8C5262:1633..1	gap2	ATCEA4C49036_1, ATCEA4C75144_1	96, 89			g3298535, g4926821	100, 79	1314, 296	9.9e-135, 3.3e-29	(AC004681) hypothetical protein [Arabidopsis thaliana]; (AC004135) T17H7.6 [Arabidopsis thaliana]
149097	ATU011	ATL8C8	gap2	ATCEA4	97							

	037	403:134..483		S11315								
149098	ATU011038	ATL8S14237:1..259	gap2	ATCEA4C13220_1	97							
149099	ATU011039	ATL8C37575:2184..1803	gap2	ATCEA4C1390_3	97							
149100	ATU011040	ATL8C32752:4999..4871	gap2	ATCEA4C45998_1	97							
149101	ATU011041	ATL8C40207:324..601	gap2	ATCEA4C13525_1, ATCEA4S1366	97, 95							
149102	ATU011042	ATL8C32781:1..510	gap2	ATCEA4S6320	97							
149103	ATU011043	ATL8C20727:1211..916	gap2	ATCEA4S1279	97							
149104	ATU011044	ATL8C4540:366..2539	gap2	ATCEA4C30124_1	96	ATL8C4540:702..2539	1.00	g3608145	99	501	8.0e-30	(AC005314) hypothetical protein [Arabidopsis thaliana]
149105	ATU011045	ATL8S20087:331..552	gap2	ATCEA4C24636_1	97							
149106	ATU011046	ATL8C3730:629..2083	gap2	ATCEA4C55788_1, ATCEA4C52947	96, 91	ATL8C3730:629..1954	0.97	g1346875	99	353	2.2e-27	PHOTOSYSTEM II REACTION

				_1								CENTREW PROTEIN [Odontella sinensis]
149107	ATU011047	ATL8C8869:2271..697	gap2	ATCEA4C12553_1, ATCEA4S31918, ATCEA4S32554	96, 91, 90	ATL8C8869:1985..997	0.96	g3204108	99	722	7.2e-65	(AJ006764) putative deoxycytidylate deaminase [Cicer arietinum]
149108	ATU011048	ATL8C49301:1257..351	gap2	ATCEA4S29816, ATCEA4S29770, ATCEA4C1855_3, ATCEA4S13152, ATCEA4S2230, ATCEA4S5054, ATCEA4S33643	96, 96, 96, 94, 94, 94, 83	ATL8C49301:1156..667	0.93	g4185511	99	627	2.4e-62	(AF102822) actin depolymerizing factor 4 [Arabidopsis thaliana]
149109	ATU011049	ATL8C32665:2246..844	gap2	ATCEA4S6753	96	ATL8C32665:2246..844	0.92	g732311	99	168	1.3e-10	HYPOTHETICAL 15.7 KD PROTEIN IN PBPD-

												COMA INTERGENIC REGION (ORF2) [Bacillus subtilis]
149110	ATU011050	ATL8C36600:2765..716	gap2	ATCEA4C119684_1, ATCEA4S7800	96, 83	ATL8C36600:2765..904	0.86	g1653508	99	88	0.38	(D90914) hypothetical protein [Synechocystis sp.]
149111	ATU011051	ATL8C27373:69..854	gap2	ATCEA4S30264	96	ATL8C27373:69..717	0.84	g2274993	99	302		(AJ000230) unnamed protein product [Hordeum vulgare]
149112	ATU011052	ATL8C34646:1242..574	gap2	ATCEA4C23203_2, ATCEA4C23203_1	96, 89	ATL8C34646:1085..765	0.77	g3183405	99	108	3.2e-09	HYPOTHETICAL 11.3 KD PROTEIN C2C6.07 IN CHROMOSOME I [Schizosaccharomyces

												pombe]
149113	ATU011053	ATL8C47724:178..3645	gap2	ATCEA4C952_1, ATCEA4C20369_1, ATCEA4C63388_1, ATCEA4S11529	96, 87, 86, 86	ATL8C47724:279..3378	0.77	g3915189	99	325	5.1e-31	UBIQUITIN-CONJUGATING ENZYME X (UBIQUITIN-PROTEIN LIGASE) (UBIQUITIN CARRIER PROTEIN) []
149114	ATU011054	ATL8C17078:29..3318	gap2	ATCEA4C8525_3, ATCEA4S1726, ATCEA4S33821, ATCEA4C8525_1, ATCEA4S31654, ATCEA4S8162	96, 96, 95, 91, 90, 83	ATL8C17078:29..2854	0.61	g3024022	99	556	1.0e-43	INITIATION FACTOR 5A-5 (EIF-5A) (EIF-4D) [Solanum tuberosum]
149115	ATU011055	ATL8C13475:3143..457	gap2	ATCEA4C34988_1, ATCEA4S26151	96, 95	ATL8C13475:2479..457	0.60	g3747132	99	675	1.4e-71	(AF096776) expansin [Lycopersicon esculentum]
149116	ATU011	ATL8C4	gap2	ATCEA4	96	ATL8C4	0.55	g21911	99	262		(AF007

	056	3699:4577..2239		C9437_1		3699:4463..2239		65				270) A_IG002P16.14 gene product [Arabidopsis thaliana]
149117	ATU011057	ATL8C20689:1..1002	gap2	ATCEA4C85081_1	96	ATL8C20689:223..1002	0.53	g2244843	99	96	6.0e-08	(Z97337) hypothetical protein [Arabidopsis thaliana]
149118	ATU011058	ATL8C22605:1..534	gap2	ATCEA4S6037, ATCEA4C58799_1	96, 93	ATL8C22605:353..284	0.48	g4105790	99	106	6.4e-09	(AF049926) PGP219 [Petunia x hybrida]
149119	ATU011059	ATL8C46815:2226..1611	gap2	ATCEA4C12253_1	96			g3281855	99	477	7.0e-36	(AL031004) hypothetical protein [Arabidopsis thaliana]
149120	ATU011060	ATL8C15858:2103..1523	gap2	ATCEA4S5075	96			g416922	99	619	8.2e-54	DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHYDROLAS

												E (DUTPASE) (DUTP PYROPHOSPHATASE) (P18) [Lycopersicon esculentum]
149121	ATU011061	ATL8C2 2727:322..693	gap2	ATCEA4C65026_1	96			g1532168	99	249	6.8e-14	(U6381 5), localized according to blastn similarity to EST sequences; therefore, the coding span corresponds only to an area of similarity since the initation codon and stop

												codon could not be precisely determined [Arabidopsis thaliana]
149122	ATU011062	ATL8C32763:1900..1	gap2	ATCEA4S27401	96			g4309868	99	2504	7.0e-206	(AC006527) putative retrotransposon-like orf [Arabidopsis thaliana]
149123	ATU011063	ATL8C39193:548..1	gap2	ATCEA4C74997_1, ATCEA4S17437, ATCEA4S21316	96, 91, 88			g82114	99	63	0.022	wound-induced protein - tomato (fragment) [Lycopersicon esculentum]
149124	ATU011064	ATL8C11702:1482..915	gap2	ATCEA4S34580, ATCEA4S34242	96, 93			g1632831	99	355	7.0e-29	(Z49698) orf [Ricinus communis]
149125	ATU011065	ATL8C29508:1	gap2	ATCEA4C24283	96, 94,			g1943720	99	380	3.2e-32	(U76831)

		474..281		_1, ATCEA4C24283_2, ATCEA4S4933, ATCEA4S32579	93, 87							thioredoxin-m [Brassica napus]
149126	ATU011066	ATL8C36984:2037..1669	gap2	ATCEA4S35885	96			g1532168	99	158	1.5e-10	(U63815) localized according to blastn similarity to EST sequences; therefore, the coding span corresponds only to an area of similarity since the initation codon and stop codon could not be precisely

												determined [Arabidopsis thaliana]
149127	ATU011067	ATL8C40000:1113..466	gap2	ATCEA4C70268_1	96			g1723324	99	118	4.0e-09	HYPOTHETICAL 11.9 KD PROTEIN YCF20 (ORF108). [Porphyra purpurea]
149128	ATU011068	ATL8C34295:1..763	gap2	ATCEA4C6203_1, ATCEA4C33289_2, ATCEA4C33289_1	96, 86, 83	ATL8C34295:74..617	0.97	g2104949	98	867	1.3e-51	(U96716) MAP kinase-like protein [Selaginella lepidophylla]
149129	ATU011069	ATL8C4135:2870..1	gap2	ATCEA4C118929_1, ATCEA4S6793, ATCEA4S916	96, 95, 82	ATL8C4135:2841..284	0.91	g4895261	98	1115	1.3e-120	(AC007658) putative serine/threonine protein kinase, 5' partial [Arabidopsis

												thaliana]
149130	ATU011070	ATL8C1862:983..2095	gap2	ATCEA4C61098_1, ATCEA4S1319	96, 94	ATL8C1862:1006..1746	0.89	g730456	98	463	1.5e-36	40S RIBOSOMAL PROTEIN S19 []
149131	ATU011071	ATL8C12331:1586..94	gap2	ATCEA4S9636, ATCEA4S11924	96, 93	ATL8C12331:790..94	0.77	g2829904	98	1498	2.8e-149	(AC002311) Hypothetical protein [Arabidopsis thaliana]
149132	ATU011072	ATL8C2765:2944..1085	gap2	ATCEA4S36315	96	ATL8C2765:2688..1497	0.77	g2765667	98	1441	1.7e-143	(Z83312) 3'(2'),5'-bisphosphate nucleotidase [Arabidopsis thaliana]
149133	ATU011073	ATL8C13050:1..1482	gap2	ATCEA4C8640_1, ATCEA4S23923	96, 91	ATL8C13050:1106..1482	0.49	g2983997	98	234	3.4e-20	(AE000749) hypothetical protein [Aquifex aeolicus]
149134	ATU011074	ATL8C47677:1797..1269	gap2	ATCEA4C2542_1, ATCEA4	96, 83			g3123349	98	239	9.8e-20	(AJ005788) hypothetical

				S32944								protein [Cicer arietinum]
149135	ATU011075	ATL8C7794:1196..1	gap2	ATCEA4C53721_1	96			g4884942	98	694	2.4e-70	(AF141980) AtHVA22b [Arabidopsis thaliana]
149136	ATU011076	ATL8C48937:1971..1	gap2	ATCEA4C29262_1, ATCEA4S24782, ATCEA4C27115_1	96, 88, 84	ATL8C48937:1919..22	0.78	g3643607, g3643611	96, 55	891, 498	5.3e-88, 7.0e-45	(AC005395) unknown protein [Arabidopsis thaliana]; (AC005395) putative casein kinase [Arabidopsis thaliana]
149137	ATU011077	ATL8C16092:1..2601	gap2	ATCEA4S30783	96	ATL8C16092:157..2601	0.57	g4416307	96	243	1.2e-09	(AF105716) hypothetical protein [Zea mays]
149138	ATU011078	ATL8C16798:2252..1	gap2	ATCEA4S1661, ATCEA4C4327	96, 92, 90, 88	ATL8C16798:2085..52	0.68	g4455210	95	1657	1.1e-165	(AL035440) putative

				1, ATCEA4C31370_1, ATCEA4C6650_1								aspartate-tRNA ligase [Arabidopsis thaliana]
149139	ATU011079	ATL8C13257:2005..1	gap2	ATCEA4C80750_1, ATCEA4S2248, ATCEA4C21423_1, ATCEA4C4373_1	96, 94, 93, 86			g4455159	95	1994	6.9e-204	(AL021687) putative protein [Arabidopsis thaliana]
149140	ATU011080	ATL8C32415:1700..1	gap2	ATCEA4S6345, ATCEA4C6428_1	96, 93	ATL8C32415:1700..176	0.93	g2245095	94	968	9.0e-94	(Z97343) formyltransferase purU homolog [Arabidopsis thaliana]
149141	ATU011081	ATL8C26954:1..2087	gap2	ATCEA4C149897_1, ATCEA4S27830, ATCEA4C68931_1	96, 90, 89	ATL8C26954:518..1981	0.82	g4454480	94	684	7.7e-74	(AC006234) putative (1-4)-beta-mannan endohydrolase [Arabidopsis thaliana]

149142	ATU011082	ATL8C45593:3610..1	gap2	ATCEA4S36359	96	ATL8C45593:2959..154	0.80	g3702962, g481815	94, 41	727, 132	1.9e-56, 9.1e-10	(AF079484) rac GTP binding protein Arac7 [Arabidopsis thaliana]; vegetative storage protein - western balsam poplar x cotton wood [Populus trichocarpa x Populus deltoides]
149143	ATU011083	ATL8C47841:1190..1	gap2	ATCEA4C22793_1	96	ATL8C47841:1124..4	0.65	g1304227	93	885	2.3e-94	(D63781) Epoxide hydrolase [Glycine max]
149144	ATU011	ATL8C4	gap2	ATCEA4	96	ATL8C4	0.49	g14882	93	1421	2.4e-	(U3841

	084	9040:1..1516		S10417		9040:382..1339		55			76	6) ferulate-5-hydroxylase [Arabidopsis thaliana]
149145	ATU011085	ATL8S2501:1..425	gap2	ATCEA4S10263	96			g4586262	93	503	1.6e-41	(AL049640) putative calmodulin [Arabidopsis thaliana]
149146	ATU011086	ATL8C14375:1679..1	gap2	ATCEA4C102787_1, ATCEA4C27995_1	96, 82	ATL8C14375:1428..293	0.90	g3482923	92	1280	2.2e-137	(AC003970) Highly similar to cinnamyl alcohol dehydrogenase, [Arabidopsis thaliana]
149147	ATU011087	ATL8C7302:588..1839	gap2	ATCEA4C116784_2, ATCEA4S2500, ATCEA4S28964	96, 95, 88	ATL8C7302:728..1484	0.42	g2997591	92	667	3.9e-74	(AF020814) glucose-6-phosphate/phosphate-translocator

												precursor [Pisum sativum]
149148	ATU011088	ATL8C30035:1861..1	gap2	ATCEA4S12022, ATCEA4S35238, ATCEA4S29314, ATCEA4C778_1	96, 95, 89, 86			g11727 04	92	2215	9.9e-235	PEPTIDE TRANSPORTER PTR2-B (HISTIDINE TRANSPORTING PROTEIN) [Arabidopsis thaliana]
149149	ATU011089	ATL8C17754:1..2862	gap2	ATCEA4S34438, ATCEA4S5628, ATCEA4C74638_1	96, 94, 86	ATL8C17754:150..2828	0.86	g29470 64	91	2222	5.8e-177	(AC002521) unknown protein [Arabidopsis thaliana]
149150	ATU011090	ATL8S1579:611..1	gap2	ATCEA4C2050_1, ATCEA4S10791	96, 94	ATL8S1579:558..13	0.49	g34829 31	91	898	4.1e-90	(AC003970) germin-like protein [Arabidopsis thaliana]
149151	ATU011091	ATL8C17437:1..1128	gap2	ATCEA4S2539	96	ATL8C17437:65..1128	0.98	g33955 88	90	174	1.8e-21	(AL031179) serine-threon

												ine protein phosphatase [Schizosaccharomyces pombe]
149152	ATU011092	ATL8C774:1..5248	gap2	ATCEA4S208, ATCEA4C51529_1	96, 96	ATL8C774:861..5248	0.89	g126722	90	1660	2.9e-189	ALPHA-MANNOSIDASE II (MANNOSYL-OLIGOSACCHARIDE 1,3-1,6-ALPHA-MANNOSIDASE) (MAN II) (GOLGI ALPHA-MANNOSIDASE II) [Mus musculus]
149153	ATU011093	ATL8C3759:339..1147	gap2	ATCEA4C23502_1	96	ATL8C3759:365..686	0.75	g4584347	90	596	4.6e-23	(AC007127) unknown protein [Arabidopsis thaliana]
149154	ATU011	ATL8C4	gap2	ATCEA4	96	ATL8C4	0.47	g41917	90	935	1.3e-	(AC005

	094	8435:2884..56		C65069_1		8435:2775..56		74			98	917) putative beta-1,3-endoglucanase [Arabidopsis thaliana]
149155	ATU011095	ATL8C14780:612..1	gap2	ATCEA4C66520_1	96			g133801	90	240	2.6e-13	CHLOROPLAST 30S RIBOSOMAL PROTEIN S15 [Nicotiana tabacum]
149156	ATU011096	ATL8C15881:1..3981	gap2	ATCEA4C21856_1, ATCEA4C26051_1	96, 89	ATL8C15881:77..3857	0.92	g4512620	89	3355	0.0	(AC004793) Identical to gb|X71364 gene for aspartate kinase homoserine dehydrogenase from Arabidopsis thaliana. []
149157	ATU011097	ATL8C1048:24	gap2	ATCEA4S11668	96	ATL8C1048:14	0.91	g4406799	89	513	5.8e-59	(AC006304)

		18..417				75..417						hypothetical protein [Arabidopsis thaliana]
149158	ATU011098	ATL8C2322:1..1427	gap2	ATCEA4S3227, ATCEA4C133526_1, ATCEA4S1284, ATCEA4S12911	96, 90, 83, 83	ATL8C2322:18..1167	0.85	g4063734	89	2046	2.9e-191	(AC006259) putative P450 [Arabidopsis thaliana]
149159	ATU011099	ATL8C8482:6573..1535	gap2	ATCEA4S26674, ATCEA4C49551_1, ATCEA4S3143	96, 91, 90	ATL8C8482:6463..1701	0.66	g1351438	89	2358	5.9e-219	XANTHINE DEHYDROGENASE (XD) (CONTAINS: XANTHINE OXIDASE (XO)) [Gallus gallus]
149160	ATU011100	ATL8C42590:1..1893	gap2	ATCEA4S13323, ATCEA4C56239_1, ATCEA4C56239_4, ATCEA4S28748	96, 92, 88, 85	ATL8C42590:213..1893	1.00	g2160152	88	1434	3.6e-122	(AC000375) ESTs gb|U75592,gb|T13956,gb|T43869 come from from this

												gene. [Arabidopsis thaliana]
149161	ATU011101	ATL8C45424:2643..1	gap2	ATCEA4C18483_1, ATCEA4S34671, ATCEA4S25137, ATCEA4S29189, ATCEA4S23437	96, 92, 91, 88, 83	ATL8C45424:2643..350	0.87	g4481948	88	311	3.7e-34	(AL035637) hypothetcal protein [Schizosaccharomyces pombe]
149162	ATU011102	ATL8C19840:989..2314	gap2	ATCEA4C937_3, ATCEA4C937_1, ATCEA4C937_2	96, 84, 82	ATL8C19840:1155..2116	0.84	g2914706	88	780	4.3e-81	(AC003974) putative homeobox protein [Arabidopsis thaliana]
149163	ATU011103	ATL8C17688:3975..1111	gap2	ATCEA4C126958_1	96	ATL8C17688:3822..2226	0.80	g4006829	88	939	1.3e-95	(AC005970) putative protein kinase [Arabidopsis thaliana]
149164	ATU011104	ATL8S20819:490..1	gap2	ATCEA4S23230,	96, 88	ATL8S20819:396..19	0.84	g1235664	87	236	1.1e-14	(U37936) novel

				ATCEA4C74399_1		6						calmodulin-like protein [Oryza sativa subsp. indica]
149165	ATU011105	ATL8C13518:3276..1	gap2	ATCEA4C116238_1, ATCEA4S32300, ATCEA4S27245, ATCEA4S26829	96, 95, 89, 88	ATL8C13518:3276..49	0.66	g4914436	87	841	9.9e-82	(AL050351) putative protein [Arabidopsis thaliana]
149166	ATU011106	ATL8C13677:1995..1	gap2	ATCEA4C56182_1, ATCEA4S30070	96, 93	ATL8C13677:1512..229	0.61	g4432824	87	412	4.7e-45	(AC006593) putative membrane-associated salt-inducible protein [Arabidopsis thaliana]
149167	ATU011107	ATL8C16449:935..1801	gap2	ATCEA4C5130_1	96	ATL8C16449:1051..1663	0.47	g4263711	87	425	9.8e-43	(AC006223) putative CCR4-associated

												transcription factor [Arabidopsis thaliana]
149168	ATU011108	ATL8C8821:1..4148	gap2	ATCEA4S9982, ATCEA4S10986	96, 87			g3757516, g1524370	87, 60	1643, 273	5.2e-135, 3.3e-25	(AC005167) putative TMV resistance protein [Arabidopsis thaliana]; (X92491) TOM20 [Solanum tuberosum]
149169	ATU011109	ATL8C567:1..747	gap2	ATCEA4S408	96	ATL8C567:53..582	0.88	g2281633	86	531	2.1e-38	(AF003097) AP2 domain containing protein RAP2.4 [Arabidopsis thaliana]
149170	ATU011110	ATL8C49655:2191..42	gap2	ATCEA4C4363_1, ATCEA4C13427	96, 92, 84	ATL8C49655:2008..85	0.88	g2062155	86	1621	2.4e-135	(AC001645) mitochondrial

				6_1, ATCEA4 S33412								processing peptidase alpha subunit precursor isolog [Arabidopsis thaliana]
149171	ATU011111	ATL8C1675:104..2369	gap2	ATCEA4C6182_1, ATCEA4S643, ATCEA4S6459	96, 94, 93	ATL8C1675:161..2326	0.79	g4585978	86	1333	9.0e-112	(AC005287) NADP specific isocitrate dehydrogenase [Arabidopsis thaliana]
149172	ATU011112	ATL8C37502:4377..313	gap2	ATCEA4S1481	96	ATL8C37502:3244..313	0.51	g2252847	86	347		(AF013293) No definition line found [Arabidopsis thaliana]
149173	ATU011113	ATL8C15090:753..1	gap2	ATCEA4C28337_1	96	ATL8C15090:680..15	0.87	g3980393	85	308	8.7e-34	(AC004561) putative glutathione

												S-transferase [Arabidopsis thaliana]
149174	ATU011114	ATL8C36626:777..1388	gap2	ATCEA4S31910	96	ATL8C36626:1289..1183	0.56	g2262176	85	182	1.0e-10	(AC002329) putative RING zinc-finger protein [Arabidopsis thaliana]
149175	ATU011115	ATL8C23247:741..3218	gap2	ATCEA4C10496_1	96	ATL8C23247:741..2805	0.43	g3004550	84	1099	1.8e-86	(AC003673) hypothetical protein [Arabidopsis thaliana]
149176	ATU011116	ATL8C4278:1494..236	gap2	ATCEA4S13517	96	ATL8C4278:1326..508	0.95	g2245103	83	76	0.96	(Z97343) hypothetical protein [Arabidopsis thaliana]
149177	ATU011117	ATL8C15484:1595..1	gap2	ATCEA4S7003	96	ATL8C15484:997..331	0.80	g3386600	83	813	4.6e-77	(AC004665) putative glycop

												rotein [Arabidopsis thaliana]
149178	ATU011118	ATL8C17940:667..2612	gap2	ATCEA4S2736	96	ATL8C17940:1311..2508	0.78	g3128186	83	266		(AC004521) hypothetical protein [Arabidopsis thaliana]
149179	ATU011119	ATL8C37331:1231..1	gap2	ATCEA4C12448_1, ATCEA4S32463	96, 87	ATL8C37331:1006..16	0.62	g4895230	83	936		(AC007660) unknown protein [Arabidopsis thaliana]
149180	ATU011120	ATL8C21850:1110..263	gap2	ATCEA4S12438	96	ATL8C21850:1020..263	0.58	g4699939	83	293	8.8e-18	(AC007166) hypothetical protein [Arabidopsis thaliana]
149181	ATU011121	ATL8C31142:885..2436	gap2	ATCEA4S2502	96			g2921500	83	238	2.3e-22	(AF037222) XRCC3 [Homo sapiens]
149182	ATU011122	ATL8C25276:5074..3	gap2	ATCEA4C11633_1	96	ATL8C25276:5025..3	0.97	g2506276	82	1805	6.5e-180	RUBISCO SUBUNI

		262				262						T BINDING-PROTEIN ALPHA SUBUNIT PRECURSOR (60 KD CHAPERONIN ALPHA SUBUNIT) (CPN-60 ALPHA) [Arabidopsis thaliana]
149183	ATU011123	ATL8C32472:1438..85	gap2	ATCEA4C104004_1, ATCEA4C17050_1	96, 91	ATL8C32472:1264..456	0.91	g3047109	82	886	2.0e-94	(AF058919) No definition line found [Arabidopsis thaliana]
149184	ATU011124	ATL8C18803:3694..627	gap2	ATCEA4C23370_1, ATCEA4S32299, ATCEA4S34958, ATCEA4S7154	96, 91, 91, 84	ATL8C18803:3252..627	0.77	g3281853	82	549	3.0e-52	(AL031004) putative protein [Arabidopsis thaliana]

149185	ATU011125	ATL8C11850:1239..322	gap2	ATCEA4S16113, ATCEA4S16112, ATCEA4C32832_3	96, 95, 90	ATL8C11850:965..430	0.76	g3047078	82	981	7.5e-96	(AF058914) similar to 11-S seed storage proteins (Pfam: Seedstore_11s.hmm, score: 19.95) [Arabidopsis thaliana]
149186	ATU011126	ATL8C16954:6662..5188	gap2	ATCEA4S36148	96	ATL8C16954:6566..5203	0.69	g4455356	82	1133	3.2e-102	(AL035524) putative protein [Arabidopsis thaliana]
149187	ATU011127	ATL8C38716:1215..529	gap2	ATCEA4C2045_1, ATCEA4S33680	96, 82			g3024516	82	774	8.0e-78	RAS-RELATED PROTEIN RAB11C [Arabidopsis thaliana]
149188	ATU011128	ATL8C13393:1..1553	gap2	ATCEA4S35119, ATCEA4S25634	96, 86			g4388833	82	925	3.5e-102	(AC006528) putative zinc-

												finger protein, 5' partial [Arabidopsis thaliana]
149189	ATU011129	ATL8C792:2230..1	gap2	ATCEA4C28746_2, ATCEA4S19290, ATCEA4S1333, ATCEA4C32183_1, ATCEA4S1431	96, 89, 86, 85, 84	ATL8C792:2202..97	0.90	g541816	81	1363	3.3e-142	protein kinase - common ice plant [Mesembryanthemum crystallinum]
149190	ATU011130	ATL8C18167:1..984	gap2	ATCEA4S29769, ATCEA4S36192	96, 88	ATL8C18167:125..456	0.86	g2982435	81	537	3.1e-50	(AL022224) retrotransposon like protein (fragment) [Arabidopsis thaliana]
149191	ATU011131	ATL8C26267:1958..1	gap2	ATCEA4C33452_1, ATCEA4S20343	96, 92	ATL8C26267:1734..1243	0.83	g4850384	81	936	3.5e-91	(AC007357) F3F19.3 [Arabidopsis thaliana]
149192	ATU011	ATL8C3	gap2	ATCEA4	96	ATL8C3	0.62	g17306	81	483	2.1e-	HYPOTH

	132	3253:2475..1		C7094_1		3253:2439..789		21			44	ETICAL 48.1 KD PROTEIN IN TUB1-CPR3 INTERGENIC REGION [Saccharomyces cerevisiae]
149193	ATU011133	ATL8C11338:988..1	gap2	ATCEA4C19304_2, ATCEA4C19304_1	96, 88			g2191173	81	1176	3.1e-120	(AF007270) contains similarity to DNA polymerase III, alpha chain (SP:P47277) [Arabidopsis thaliana]
149194	ATU011134	ATL8C48427:1..2451	gap2	ATCEA4C11797_2, ATCEA4S35157, ATCEA4C39619_1	96, 93, 84	ATL8C48427:130..2403	0.88	g4101591	80	655	7.3e-53	(AF005051) aspartyl aminopeptidase [Mus musculus]
149195	ATU011135	ATL8C18455:2	gap2	ATCEA4C13844	96	ATL8C18455:3	0.83	g4220482	80	374	1.1e-30	(AC006069)

		71..928		5_1		55..890						hypothetical protein [Arabidopsis thaliana]
149196	ATU011136	ATL8C45600:1344..1	gap2	ATCEA4C77572_1	96	ATL8C45600:1344..263	0.78	g3033396	80	273	5.5e-23	(AC004238) unknown protein [Arabidopsis thaliana]
149197	ATU011137	ATL8C36563:1887..145	gap2	ATCEA4C9970_1, ATCEA4S30958, ATCEA4S13796, ATCEA4C25056_1	96, 95, 91, 85	ATL8C36563:1845..147	0.70	g4581109	80	2069	6.1e-150	(AC005825) unknown protein [Arabidopsis thaliana]
149198	ATU011138	ATL8C24621:1365..1829	gap2	ATCEA4S790	96	ATL8C24621:1482..1817	0.60	g128405	80	310	1.0e-31	NODULIN 21 (N-21) [Glycine max]
149199	ATU011139	ATL8C16618:2758..479	gap2	ATCEA4S30152, ATCEA4S27101	96, 92	ATL8C16618:2634..490	0.57	g4432858	80	1853	6.3e-178	(AC006300) putative disease resistance protei

												n [Arabidopsis thaliana]
149200	ATU011140	ATL8C6929:1572..1	gap2	ATCEA4C435_1	96			g4210334	80	1769	1.6e-164	(AJ223804) 2-oxoglutarate dehydrogenase, E3 subunit [Arabidopsis thaliana]
149201	ATU011141	ATL8C9229:730..2369	gap2	ATCEA4S27102, ATCEA4S34705, ATCEA4C64121_1, ATCEA4S31667	96, 89, 88, 85	ATL8C9229:730..2134	0.88	g4835771	79	616		(AC007202) Similar to []
149202	ATU011142	ATL8C47561:781..1	gap2	ATCEA4C14869_1, ATCEA4S31164, ATCEA4S31466	96, 91, 83	ATL8C47561:781..18	0.82	g1666173	79	337	2.5e-29	(Y09106) transcription factor [Nicotiana plumbaginifolia]
149203	ATU011143	ATL8C15911:1..1639	gap2	ATCEA4S29617, ATCEA4	96, 92, 90	ATL8C15911:39..1495	0.75	g1076515	79	1012	1.2e-110	pectinesterase precur

				S33116, ATCEA4 S32865								sor - kidney bean [Phaseolus vulgaris]
149204	ATU011144	ATL8C15327:1982..363	gap2	ATCEA4 S26031, ATCEA4 S451	96, 83	ATL8C15327:1937..363	0.69	g1495366, g2213590	79, 61	410, 406	3.7e-41, 1.7e-37	(Z69370) nitrite transporter [Cucumis sativus]; (AC000348) T7N9.10 [Arabidopsis thaliana]
149205	ATU011145	ATL8C46403:1937..491	gap2	ATCEA4 S35201, ATCEA4 S34474	96, 90	ATL8C46403:1833..761	0.64	g2832658	79	1097	1.2e-87	(AL021710) putative protein [Arabidopsis thaliana]
149206	ATU011146	ATL8C48824:105..1878	gap2	ATCEA4 C16069_1	96	ATL8C48824:105..1851	0.63	g4415913	79	387	6.3e-25	(AC006282) unknown protein [Arabidopsis thaliana]

149207	ATU011147	ATL8C13106:5035..3082	gap2	ATCEA4C982_1	96	ATL8C13106:4685..3351	0.63	g4454056	79	730	9.9e-68	(AJ000930) ClpP [Arabidopsis thaliana]
149208	ATU011148	ATL8C12667:1..231	gap2	ATCEA4S31541	96			g4539467	79	394	7.4e-36	(AL049500) putative protein [Arabidopsis thaliana]
149209	ATU011149	ATL8C21956:2987..1	gap2	ATCEA4C56539_1, ATCEA4S36111	96, 96	ATL8C21956:2905..1467	0.71	g4572674	78	1473	2.1e-123	(AC006954) unknown protein [Arabidopsis thaliana]
149210	ATU011150	ATL8C26985:1066..4437	gap2	ATCEA4C89357_1, ATCEA4C13673_1	96, 93	ATL8C26985:1369..4105	0.93	g1652704	77	322	3.0e-25	(D90907) hypothetical protein [Synechocystis sp.]
149211	ATU011151	ATL8C7674:805..1	gap2	ATCEA4C69952_1, ATCEA4C6953_2, ATCEA4C6953	96, 93, 91, 87	ATL8C7674:800..153	0.89	g4204271	77	1039	2.2e-109	(AC005223) Unknown protein [Arabidopsis

				1, ATCEA4 S18370								thaliana]
149212	ATU011 152	ATL8C2 6081:1 ..1643	gap2	ATCEA4 S12013	96	ATL8C2 6081:6 3..164 3	0.71	g47551 94	77	2070	2.9e-210	(AC007 018) hypoth etical protei n [Arabi dopsis thalia na]
149213	ATU011 153	ATL8C4 8936:1 871..1 081	gap2	ATCEA4 C56866 _2, ATCEA4 S30931	96, 86			g45389 42	77	398	3.1e-29	(AL049 483) uncharacteri zed protei n [Arabi dopsis thalia na]
149214	ATU011 154	ATL8C9 132:1. .755	gap2	ATCEA4 C72730 _1	96	ATL8C9 132:49 ..746	0.91	g16532 16	76	132		(D9091 1) hypoth etical protei n [Synec hocyst is sp.]
149215	ATU011 155	ATL8C1 651:1. .4664	gap2	ATCEA4 C13261 _1, ATCEA4 S32500	96, 92	ATL8C1 651:47 8..195 5	0.67	g45444 50	76	757	1.8e-79	(AC006 592) hypoth etical protei n [Arabi dopsis thalia na]

149216	ATU011156	ATL8C37833:1..899	gap2	ATCEA4S34525, ATCEA4S35975	96, 93	ATL8C37833:99..864	0.49	g4262182	76	605	1.1e-61	(AC005508) 44123 [Arabidopsis thaliana]
149217	ATU011157	ATL8C49886:471..1	gap2	ATCEA4C101520_1	96			g1565227	76	422	5.6e-32	(X95573) salt-tolerance zinc finger protein [Arabidopsis thaliana]
149218	ATU011158	ATL8C13176:9..1028	gap2	ATCEA4S26150, ATCEA4C8197_1	96, 89	ATL8C13176:944..9	0.91	g4220481	75	339	3.0e-32	(AC006069) unknown protein [Arabidopsis thaliana]
149219	ATU011159	ATL8C47276:1385..1	gap2	ATCEA4C35356_1	96	ATL8C47276:1156..115	0.58	g4734005	75	776	5.1e-75	(AC007178) hypothetical protein [Arabidopsis thaliana]
149220	ATU011160	ATL8C46164:1735..1	gap2	ATCEA4S10885, ATCEA4S2271,	96, 96, 95	ATL8C46164:1696..19	0.99	g3107905	74	1201	5.1e-69	(D85101) leaf protein

				ATCEA4 S12275								[Ipomoea nil]
149221	ATU011161	ATL8C18593:1..3362	gap2	ATCEA4 S19063	96	ATL8C18593:163..1663	0.66	g3395431	74	337	2.1e-28	(AC004683) unknown protein [Arabidopsis thaliana]
149222	ATU011162	ATL8C36844:608..1171	gap2	ATCEA4C26856_1	96	ATL8C36844:641..1138	0.61	g2459425	74	101	2.5e-05	(AC002332) plastid protein [Arabidopsis thaliana]
149223	ATU011163	ATL8C41793:4240..1	gap2	ATCEA4 S203	96	ATL8C41793:3899..1351	0.54	g4586071, g3377816	74, 37	1003, 1361	2.6e-82, 6.8e-138	(AC006194) putative PHA2-like protein [Arabidopsis thaliana]; (AF076275) contains similarity to Arabidopsis thalia

												na retrotranspo son Athila (GB:X81801) [Arabidopsis thaliana]
149224	ATU011164	ATL8C27624:246..2181	gap2	ATCEA4C18461_1	96	ATL8C27624:327..2026	0.49	g4538993	74	441		(AL049481) putative host response protein [Arabidopsis thaliana]
149225	ATU011165	ATL8C34604:163..2655	gap2	ATCEA4C1826_1	96			g3822403	74	1671	4.1e-172	(AF087932) hydroperoxide lyase [Arabidopsis thaliana]
149226	ATU011166	ATL8C23553:2109..57	gap2	ATCEA4C779_1	96	ATL8C23553:1940..117	0.76	g3914370	73	1309	3.2e-118	GLYCEROL-3-PHOSPHATE ACYLTRANSFERASE PRECURSOR (GPAT) [Arabi

												dopsis thaliana]
149227	ATU011167	ATL8C24521:729..1	gap2	ATCEA4C15595_1	96	ATL8C24521:219..93	0.70	g3157951	73	666	2.8e-52	(AC002131) Contains similarity to vesicle trafficking protein gb|U91538 from Mus musculus. ESTs gb|F15494 and gb|F14097 come from this gene. [Arabidopsis thaliana]
149228	ATU011168	ATL8C6254:1618..1195	gap2	ATCEA4C64353_1	96	ATL8C6254:1614..1451	0.59	g4164539	73	156	3.2e-16	(AF079170) phloem protein [Cucurbita maxima]

149229	ATU011169	ATL8C33434:1784..788	gap2	ATCEA4S30559	96	ATL8C33434:1707..974	0.48	g3420047	73	756	1.7e-77	(AC004680) putative protein kinase [Arabidopsis thaliana]
149230	ATU011170	ATL8C39612:2716..6606	gap2	ATCEA4C10911_1, ATCEA4C23246_2	96, 92	ATL8C39612:2758..4771, ATL8C39612:6527..5068	0.46, 0.82	g3193329	72	395	2.3e-30	(AF069299) contains similarity to EF-hand calcium-binding domain (Pfam: efhand.hmm, score; 16.10) [Arabidopsis thaliana]
149231	ATU011171	ATL8C23172:219..943	gap2	ATCEA4C31068_1, ATCEA4C7305_1	96, 92	ATL8C23172:219..905	0.92	g4335745	71	136	5.4e-12	(AC006284) putative hydrolase (contains an esterase/lipase/thioeste

												rase active site serine domain (prosite: PS50187) [Arabidopsis thaliana]
149232	ATU011172	ATL8C6267:1..1595	gap2	ATCEA4C28708_1, ATCEA4S34739	96, 92	ATL8C6267:145..1550	0.91	g3860250	71	646	4.8e-52	(AC005824) putative chloroplast prephenate dehydratase [Arabidopsis thaliana]
149233	ATU011173	ATL8C13738:740..1	gap2	ATCEA4S15351, ATCEA4C2068_1	96, 93	ATL8C13738:569..55	0.85	g2231312	71	625	1.8e-42	(U75603) AtRab18 [Arabidopsis thaliana]
149234	ATU011174	ATL8C3866:2157..917	gap2	ATCEA4C30464_1	96	ATL8C3866:1706..917	0.58	g3128172	71	1284	1.0e-130	(AC004521) hypothetical protein [Arabidopsis thaliana]

149235	ATU011175	ATL8C40431:1..977	gap2	ATCEA4C945_1	96	ATL8C40431:11..977	0.52	g3024526	71	713	4.0e-71	RAS-RELATED PROTEIN RAB11 [Arabidopsis thaliana]
149236	ATU011176	ATL8C43503:1..2650	gap2	ATCEA4S20244, ATCEA4S12064	96, 92	ATL8C43503:10..2245	0.92	g3668093	70	316		(AC004667) unknown protein [Arabidopsis thaliana]
149237	ATU011177	ATL8C49881:1205..1	gap2	ATCEA4C5720_1, ATCEA4S32562, ATCEA4C33804_1	96, 91, 82	ATL8C49881:1183..54	0.72	g3482967	70	1097	3.8e-109	(AL031369) Protein phosphatase 2C-like protein [Arabidopsis thaliana]
149238	ATU011178	ATL8C25682:1..1081	gap2	ATCEA4C10471_1	96	ATL8C25682:675..238	0.71	g2739373	70	474	4.4e-43	(AC002505) putative flavonol 3-o-glucosyltransferase

												[Arabidopsis thaliana]
149239	ATU011179	ATL8C24210:22..3128	gap2	ATCEA4C70024_1, ATCEA4S13899, ATCEA4S34347	96, 93, 91	ATL8C24210:250..2704	0.68	g4218115, g4218116, g3738333	70, 52, 32	289, 465, 255	7.0e-16, 1.5e-29, 0.00036	(AL035353) putative protein [Arabidopsis thaliana]; (AL035353) putative protein [Arabidopsis thaliana]; (AC005170) unknown protein [Arabidopsis thaliana]
149240	ATU011180	ATL8C13684:1369..1	gap2	ATCEA4S34101, ATCEA4S2571	96, 92	ATL8C13684:1261..58	0.59	g3395426	70	1546	1.6e-144	(AC004683) unknown protein [Arabidopsis thaliana]
149241	ATU011	ATL8C3	gap2	ATCEA4	96			g11736	70	817	3.3e-	(U3577

	181	5495:1..768		C74555_1				38			76	9) 1-aminocyclopropane-1-carboxylate synthase [Triticum aestivum]
149242	ATU011182	ATL8C14196:1598..1	gap2	ATCEA4C6644_1	96			g4249384	70	675	1.9e-59	(AC005966) Similar to [Arabidopsis thaliana]
149243	ATU011183	ATL8C23577:3919..4986	gap2	ATCEA4C8408_2, ATCEA4S23300	96, 83			g294845	70	558	1.9e-31	(L13655) membrane protein [Saccharum hybrid cultivar H65-7052]
149244	ATU011184	ATL8C35150:2422..970	gap2	ATCEA4C4247_1, ATCEA4C4247_2, ATCEA4C4247_3	96, 95, 93			g3088646	70	814	7.7e-79	(AF056493) pectinmethylesterase [Pisum sativum]
149245	ATU011185	ATL8C9548:23	gap2	ATCEA4C680_1	96, 93	ATL8C9548:22	0.93	g3184061,	69, 30	442, 321	1.1e-24,	(AL023776)

		34..1		, ATCEA4 S35875		19..17 5		g37760 07			8.8e-08	atp dependent helicase [Schizosaccharomyces pombe]; (AJ010467) RNA helicase [Arabidopsis thaliana]
149246	ATU011186	ATL8C4 1487:1 309..2 843	gap2	ATCEA4 S30023	96	ATL8C4 1487:1 309..2 417	0.91	g36081 30	69	947	1.7e-91	(AC005314) putative serpin [Arabidopsis thaliana]
149247	ATU011187	ATL8C2 7684:2 000..1	gap2	ATCEA4 S3661, ATCEA4 C5247_ 1	96, 95	ATL8C2 7684:1 902..1 13	0.87	g45103 42	69	2053		(AC006921) putative serine/threonine protein kinase [Arabidopsis thaliana]
149248	ATU011188	ATL8C6 517:1.	gap2	ATCEA4 S30067	96	ATL8C6 517:45	0.74	g46782 22	69	173	4.2e-18	(AC007135)

		.1016				3..906						unknown protein [Arabidopsis thaliana]
149249	ATU011189	ATL8C4527:382..3411	gap2	ATCEA4C536_1, ATCEA4C118072_1, ATCEA4S28338, ATCEA4C771852	96, 96, 90, 83	ATL8C4527:382..3290	0.66	g1546700	69	996	3.5e-94	(X98804) peroxidase ATP18a [Arabidopsis thaliana]
149250	ATU011190	ATL8C38818:1..1198	gap2	ATCEA4C46721_1	96	ATL8C38818:722..1184	0.61	g2245112	69	578	1.1e-34	(Z97343) hypothetical protein [Arabidopsis thaliana]
149251	ATU011191	ATL8C38036:1..1728	gap2	ATCEA4C53883_1	96	ATL8C38036:86..1555	0.90	g4587566	68	780	3.4e-83	(AC006550) Contains 2 PF|00400 WD40, G-beta repeats. [Arabidopsis thaliana]
149252	ATU011	ATL8C2	gap2	ATCEA4	96	ATL8C2	0.83	g38602	68	205	2.3e-	(AC005

	192	5241:2670..1857		S4959		5241:2659..2298		58			15	824) unknown protein [Arabidopsis thaliana]
149253	ATU011193	ATL8C11735:1..1057	gap2	ATCEA4C1439_1	96	ATL8C11735:312..976	0.68	g2129759	68	827	3.1e-90	UDPglucose 4-epimerase (EC 5.1.3.2) - Arabidopsis thaliana [Arabidopsis thaliana]
149254	ATU011194	ATL8C9299:1..2868	gap2	ATCEA4C11084_1	96	ATL8C9299:421..2809	0.66	g3935168	68	1467		(AC004557) F17L21.11 [Arabidopsis thaliana]
149255	ATU011195	ATL8C30174:1..969	gap2	ATCEA4C16494_1, ATCEA4S26890, ATCEA4S34175	96, 96, 90	ATL8C30174:55..664	0.48	g4895197	68	176	1.4e-14	(AC007661) hypothetical protein [Arabidopsis thaliana]
149256	ATU011196	ATL8C42181:1	gap2	ATCEA4S2960	96	ATL8C42181:2	0.97	g4455243	67	1437	3.3e-149	(AL035523)

		..1150				12..996						alpha-amylase-like protein [Arabidopsis thaliana]
149257	ATU011197	ATL8C662:101..2750	gap2	ATCEA4C4370_1	96	ATL8C662:101..2597	0.94	g2145358	67	2312	1.0e-200	(Y10922) HD-Zip protein [Arabidopsis thaliana]
149258	ATU011198	ATL8C13961:1..2564	gap2	ATCEA4C14240_1, ATCEA4S957	96, 84	ATL8C13961:51..2564	0.84	g2462837	67	1505	2.0e-138	(AF000657) hypothetical protein [Arabidopsis thaliana]
149259	ATU011199	ATL8C35629:1..2936	gap2	ATCEA4C5437_1, ATCEA4C79134_1	96, 94	ATL8C35629:132..2936	0.78	g2708745	67	1383	1.8e-93	(AC003952) putative calcium-dependent ser/thr protein kinase [Arabidopsis thaliana]

149260	ATU011200	ATL8C416:3382..4777	gap2	ATCEA4S3320	96	ATL8C416:3725..4683	0.54	g4753653	67	516	4.2e-34	(AL049751) putative protein [Arabidopsis thaliana]
149261	ATU011201	ATL8C45771:1018..1	gap2	ATCEA4S34414, ATCEA4S32871, ATCEA4C7887_1, ATCEA4S25805	96, 94, 94, 93	ATL8C45771:772..1311	0.42	g4455246	67	1064	1.3e-102	(AL035523) putative protein [Arabidopsis thaliana]
149262	ATU011202	ATL8C35076:546..1	gap2	ATCEA4S15369, ATCEA4C29782_1	96, 95	ATL8C35076:503..89	0.93	g4883606	66	568	2.4e-58	(AC006922) hypothetical protein [Arabidopsis thaliana]
149263	ATU011203	ATL8S2211:12..559	gap2	ATCEA4S5987	96	ATL8S2211:271..469	0.89	g4510358	66	353	2.3e-32	(AC006921) putative touch-induced calmodulin [Arabidopsis thaliana]
149264	ATU011	ATL8C1	gap2	ATCEA4	96, 82	ATL8C1	0.75	g19033	66, 52	537,	2.2e-	(AC000

	204	0880:1..2214		S12312, ATCEA4S10426		0880:117..1895		59, g4503609		344	28, 1.3e-33	104) F19P19.21 [Arabidopsis thaliana]; electron-transfer-flavoprotein, beta polypeptide [Homo sapiens]
149265	ATU011205	ATL8C46545:1054..1	gap2	ATCEA4C94558_3, ATCEA4S21957, ATCEA4C94558_1	96, 90, 83	ATL8C46545:899..48	0.66	g3033375	66	668	2.2e-61	(AC004238) putative berberine bridge enzyme [Arabidopsis thaliana]
149266	ATU011206	ATL8C36113:139..1077	gap2	ATCEA4C40736_1	96	ATL8C36113:190..1040	0.63	g731718	66	140	7.9e-11	HYPOTHETICAL 30.6 KD PROTEIN IN ACT5-YCK1 INTERGENIC REGION [Saccharomyces

												cerevisiae]
149267	ATU0111207	ATL8C25123:1..659	gap2	ATCEA4C186_1, ATCEA4C186_2, ATCEA4C1987_1	96, 88, 84	ATL8C25123:308..594	0.96	g3036799	65	411	2.3e-44	(AL022373) ras-related small GTP-binding protein [Arabidopsis thaliana]
149268	ATU0111208	ATL8C2082:1969..1	gap2	ATCEA4S6621	96	ATL8C2082:1954..171	0.92	g4006893	65	594	1.4e-54	(Z99708) aminopeptidase-like protein [Arabidopsis thaliana]
149269	ATU0111209	ATL8C25419:1106..547	gap2	ATCEA4C20523_1	96	ATL8C25419:1011..729	0.91	g4886269	65	269	3.1e-10	(AL050300) putative ribosomal protein S14 [Arabidopsis thaliana]
149270	ATU0111210	ATL8C22959:1..2225	gap2	ATCEA4S10565	96			g4914414	65	1441	7.1e-112	(AL050352) Ca2+-transp

												orting ATPase -like protein [Arabidopsis thaliana]
149271	ATU011211	ATL8C22183:1429..2571	gap2	ATCEA4S6961	96			g2245077	65	648	8.1e-53	(Z97343) glucanase homolog [Arabidopsis thaliana]
149272	ATU011212	ATL8C45375:1..1140	gap2	ATCEA4C5229_1	96	ATL8C45375:72..1140	0.98	g1552576	64	154	7.8e-17	(Z80233) hypothetical protein Rv0021c [Mycobacterium tuberculosis]
149273	ATU011213	ATL8C46422:1..4238	gap2	ATCEA4S2665, ATCEA4S27353	96, 94	ATL8C46422:73..4238	0.93	g2731637	64	108	0.063	(U70667) Fas-ligand associated factor 1 [Homo sapiens]
149274	ATU011	ATL8C2	gap2	ATCEA4	96	ATL8C2	0.92	g34618	64	543	1.1e-	(AC004

	214	2531:1..853		S10868		2531:78..853		19			51	138) unknown protein [Arabidopsis thaliana]
149275	ATU011215	ATL8C48094:1859..1	gap2	ATCEA4C11454_1, ATCEA4S27159	96, 92	ATL8C48094:1619..202	0.89	g1213460	64	233	1.5e-14	(U03374) C subunit of V-ATPase [Amblyomma americanum]
149276	ATU011216	ATL8C26857:1..1863	gap2	ATCEA4C135056_1, ATCEA4C86082_1	96, 84	ATL8C26857:122..1756	0.76	g4895199	64	145	9.4e-10	(AC007661) hypothetical protein [Arabidopsis thaliana]
149277	ATU011217	ATL8C29333:1..1141	gap2	ATCEA4S29907	96	ATL8C29333:55..1135	0.68	g498707	64	676	2.0e-62	(X78422) HYP1 [Arabidopsis thaliana]
149278	ATU011218	ATL8C49399:1588..320	gap2	ATCEA4C191_1	96			g481812	64	1766	1.8e-135	DNA-binding protein GT-2 - Arabidopsis thalia

												na [Arabidopsis thaliana]
149279	ATU011219	ATL8C17592:1..1422	gap2	ATCEA4S31224, ATCEA4S35504	96, 89	ATL8C17592:108..1244	0.98	g3128187	63	1230	1.3e-138	(AC004521) putative beta-glucosidase [Arabidopsis thaliana]
149280	ATU011220	ATL8C47127:3841..119	gap2	ATCEA4C68245_1	96	ATL8C47127:3715..119	0.92	g481762	63	644	2.1e-56	beta-adaptin 1 - fruit fly (Drosophila melanogaster) [Drosophila melanogaster]
149281	ATU011221	ATL8C14617:1236..1	gap2	ATCEA4C43918_1, ATCEA4C116723_1, ATCEA4S28975	96, 95, 94	ATL8C14617:783..219	0.84	g4263787	63	1016	1.7e-87	(AC006068) unknown protein [Arabidopsis thaliana]
149282	ATU011222	ATL8C15720:3458..1	gap2	ATCEA4S7176	96	ATL8C15720:3327..98	0.72	g2462744, g4455279	63, 32	412, 1695	2.9e-38, 9.5e-174	(AC002292) Hypothetical

												protein [Arabidopsis thaliana]; (AL035527) DNA-directed RNA polymerase (EC 2.7.7.6) II second largest chain [Arabidopsis thaliana]
149283	ATU011223	ATL8C43964:1882..1	gap2	ATCEA4C22736_1	96	ATL8C43964:1797..212	0.65	g1707021	63	294		(U78721) Ubiquitin-conjugating enzyme, E2-16kD isolog [Arabidopsis thaliana]
149284	ATU011224	ATL8C19623:1..581	gap2	ATCEA4S33524	96	ATL8C19623:254..121	0.51	g4678364	63	98	9.2e-05	(AL049659) putative protein [Arabi

												dopsis thaliana]
149285	ATU011225	ATL8C4171:1403..1	gap2	ATCEA4S4071, ATCEA4S32732, ATCEA4C63308_1, ATCEA4C29546_2, ATCEA4S3616	96, 96, 91, 90, 84			g3769673	63	396	1.1e-27	(AF095285) Tic20 [Pisum sativum]
149286	ATU011226	ATL8C10173:3000..4192	gap2	ATCEA4C32237_2, ATCEA4C32237_1	96, 85			g1729938	63	181		THIOREDOXIN-LIKE PROTEIN SLR0233 [Synechocystis sp.]
149287	ATU011227	ATL8C14634:1471..109	gap2	ATCEA4C45987_1, ATCEA4S5609	96, 88			g3157934	63	581	2.7e-49	(AC002131) Similar to hypothetical protein F09E5.8 gb|U37429 from C. elegans. ESTs gb|T42

												019 and gb|N97000 come from this gene. [Arabidopsis thaliana]
149288	ATU011228	ATL8C36395:1524..2184	gap2	ATCEA4C136754_1	96			g1707022	63	660	5.2e-27	(U78721) proline-rich protein isolog [Arabidopsis thaliana]
149289	ATU011229	ATL8C47760:1547..824	gap2	ATCEA4C969_1, ATCEA4S25129	96, 85	ATL8C47760:1416..1278	0.84	g1362017	62	718	1.1e-43	zinc finger protein 4 - Arabidopsis thaliana [Arabidopsis thaliana]
149290	ATU011230	ATL8C4428:1261..1	gap2	ATCEA4C18208_1, ATCEA4S3386	96, 88	ATL8C4428:736..68	0.79	g3643598	62	920	1.8e-99	(AC005395) putative poly(A) polymerase [Arabidopsis

												thaliana]
149291	ATU011231	ATL8C49209:120..411	gap2	ATCEA4C75309_1, ATCEA4S31669, ATCEA4C75309_3	96, 94, 88			g4531440	62	392	1.8e-36	(AC006224) unknown protein [Arabidopsis thaliana]
149292	ATU011232	ATL8C37029:605..1484	gap2	ATCEA4S6474	96	ATL8C37029:605..1455	0.81	g1946368	61	251		(U93215) unknown protein [Arabidopsis thaliana]
149293	ATU011233	ATL8C16314:4922..1398	gap2	ATCEA4S29631	96	ATL8C16314:4920..1398	0.80	g2191132	61	1353	6.5e-108	(AF007269) contains weak similarity to nebulin [Arabidopsis thaliana]
149294	ATU011234	ATL8C42509:453..1193	gap2	ATCEA4C7495_1, ATCEA4S26379	96, 86	ATL8C42509:852..1165	0.70	g2914702	61	885	1.9e-33	(AC003974) unknown protein [Arabidopsis thalia

												na]
149295	ATU011235	ATL8C702:196..1803	gap2	ATCEA4S9926	96	ATL8C702:231..1564	0.65	g4678260	61	930	7.2e-82	(AL049657) putative protein [Arabidopsis thaliana]
149296	ATU011236	ATL8C6531:1..1346	gap2	ATCEA4C79052_1, ATCEA4S32843, ATCEA4C17536_1	96, 91, 88	ATL8C6531:314..1165	0.55	g4406759	61	311	1.3e-16	(AC006836) hypothetical protein [Arabidopsis thaliana]
149297	ATU011237	ATL8C2286:2142..1	gap2	ATCEA4S25912, ATCEA4C50423_1, ATCEA4S22162	96, 89, 86	ATL8C2286:2040..1099, ATL8C2286:178..556	0.44, 0.50	g2289002, g3785980	61, 32	254, 460	8.2e-14, 1.8e-43	(AC002335) unknown protein [Arabidopsis thaliana]; (AC005560) hypothetical protein [Arabidopsis thaliana]
149298	ATU011238	ATL8C25751:1808..230	gap2	ATCEA4C43833_1, ATCEA4	96, 89, 84	ATL8C25751:1535..659	0.87	g3402692	60	608	4.0e-52	(AC004697) putative

				S31941, ATCEA4 S32902								CDP-diacylglycerol--glycerol-3-phosphate 3-phosphatidyltransferase [Arabidopsis thaliana]
149299	ATU011239	ATL8C7902:2360..37	gap2	ATCEA4C45296_1	96	ATL8C7902:2343..843	0.86	g4468810	60	251	5.2e-24	(AL035601) putative protein [Arabidopsis thaliana]
149300	ATU011240	ATL8C27813:1111..1	gap2	ATCEA4C90943_1, ATCEA4C30305_1	96, 89	ATL8C27813:792..496	0.82	g3355490	60	793		(AC004218) putative dolichyl-phosphate beta-glucosyltransferase [Arabidopsis thaliana]
149301	ATU011241	ATL8C46714:1	gap2	ATCEA4S6789	96			g4220527	60	868	3.1e-78	(AL035356)

		888..1										putative protein [Arabidopsis thaliana]
149302	ATU011242	ATL8C37121:2012..1049	gap2	ATCEA4S17249, ATCEA4C29527_1	96, 96	ATL8C37121:1834..1295	0.96	g4867999	59	162		(AF078164) Ku70-binding protein [Homo sapiens]
149303	ATU011243	ATL8S8715:571..1	gap2	ATCEA4C1751_1	96	ATL8S8715:412..124	0.79	g3941522	59	722	1.0e-70	(AF062915) putative transcription factor [Arabidopsis thaliana]
149304	ATU011244	ATL8C26953:539..2204	gap2	ATCEA4C1820_1	96	ATL8C26953:669..2047	0.77	g4768281	59	1098	7.6e-114	(AF085231) cadmium resistance factor 1 [Arabidopsis thaliana]
149305	ATU011245	ATL8C31597:1..594	gap2	ATCEA4C29012_1	96	ATL8C31597:153..53	0.75	g3242704	59	593	3.8e-57	(AC003040) hypoth

						1						etical protein [Arabidopsis thaliana]
149306	ATU011246	ATL8C29794:888..1	gap2	ATCEA4S29682	96	ATL8C29794:823..374	0.65	g3201617	59	237	4.6e-18	(AC004669) hypothetical protein [Arabidopsis thaliana]
149307	ATU011247	ATL8C1935:2598..186	gap2	ATCEA4C129624_1	96	ATL8C1935:2550..201	0.44	g4874306, g3445238	59, 51	716, 109	1.7e-70, 1.3e-09	(AC006053) hypothetical protein [Arabidopsis thaliana]; (AL022347) putative protein [Arabidopsis thaliana]
149308	ATU011248	ATL8C4139:1016..1	gap2	ATCEA4C118929_1	96	ATL8C4139:608..264	0.42	g4895261	59	711	2.7e-79	(AC007658) putative serine/threonine protei

												n kinase , 5' partial [Arabidopsis thaliana]
149309	ATU011249	ATL8C11826:1010..1	gap2	ATCEA4C120658_1	96			g3152614	59	699	1.7e-45	(AC004482) unknown protein [Arabidopsis thaliana]
149310	ATU011250	ATL8C46092:624..1	gap2	ATCEA4C59270_1	96			g3859599	59	486	1.4e-48	(AF104919) similar to class I chitinases (Pfam: PF00182, E=1.2e-142, N=1) [Arabidopsis thaliana]
149311	ATU011251	ATL8C2245:947..1	gap2	ATCEA4C12906_2	96	ATL8C2245:8955..642	0.98	g4874305	58	843	7.4e-51	(AC006053) unknown protein [Arabidopsis

												thaliana]
149312	ATU011252	ATL8C7477:1200..1	gap2	ATCEA4C21366_1, ATCEA4C4137_1	96, 96	ATL8C7477:1200..444	0.94	g3970880	58	306	4.3e-19	(AB015724) nuclear receptor binding factor-1 [Rattus norvegicus]
149313	ATU011253	ATL8C41208:488..1	gap2	ATCEA4C521_1	96	ATL8C41208:395..94	0.90	g480618	58	636	4.1e-47	ATAF1 protein - Arabidopsis thaliana (fragment) [Arabidopsis thaliana]
149314	ATU011254	ATL8C38119:1036..1	gap2	ATCEA4C23697_1	96	ATL8C38119:940..294	0.89	g4006909	58	65	0.00030	(Z99708) putative protein [Arabidopsis thaliana]
149315	ATU011255	ATL8C24491:943..2636	gap2	ATCEA4S1379	96	ATL8C24491:999..2562	0.82	g3763916	58	1304	4.3e-90	(AC004450) unknown protein

												[Arabidopsis thaliana]
149316	ATU011256	ATL8C6502:3893..1	gap2	ATCEA4C3425_1	96	ATL8C6502:3834..353	0.75	g4504997	58	181	1.7e-11	ligase IV, DNA, ATP-dependent [Homo sapiens]
149317	ATU011257	ATL8C11714:984..1	gap2	ATCEA4S736	96	ATL8C11714:941..491	0.73	g1402916	58	807	1.1e-76	(X98319) peroxidase [Arabidopsis thaliana]
149318	ATU011258	ATL8C38097:1..1079	gap2	ATCEA4S2225, ATCEA4C139209_1	96, 87	ATL8C38097:297..1023	0.68	g3426036	58	198	9.9e-11	(AC005168) unknown protein [Arabidopsis thaliana]
149319	ATU011259	ATL8C23989:350..2747	gap2	ATCEA4C14092_1	96			g3236255	58	538	6.1e-56	(AC004684) hypothetical protein [Arabidopsis thaliana]
149320	ATU011260	ATL8C33867:1587..1	gap2	ATCEA4S2119	96	ATL8C33867:1275..7	0.90	g3242702	57	933		(AC003040) hypoth

		3				2						etical protein [Arabidopsis thaliana]
149321	ATU011261	ATL8C43001:3250..1	gap2	ATCEA4C121149_1	96	ATL8C43001:2772..41	0.88	g2497366	57	158	1.2e-10	INTERFERON-GAMMA INDUCIBLE PROTEIN MG11 [Mus musculus]
149322	ATU011262	ATL8C48733:1307..1	gap2	ATCEA4S7820, ATCEA4C38125_1, ATCEA4S24206	96, 90, 82	ATL8C48733:1307..421	0.86	g1361991	57	487	7.4e-54	homeotic protein ATK1 - Arabidopsis thaliana [Arabidopsis thaliana]
149323	ATU011263	ATL8C10905:17..1317	gap2	ATCEA4C43970_1	96	ATL8C10905:587..1112	0.70	g4262162	57	404	2.1e-43	(AC005275) putative glycosylation enzyme [Arabidopsis thaliana]
149324	ATU011264	ATL8C15751:924..54	gap2	ATCEA4S27995	96	ATL8C15751:924..64	0.42	g3064039	57	85	5.1e-06	(AF054445) major

		5				4						latex protein homolog [Mesembryanthemum crystallinum]
149325	ATU011265	ATL8C11896:774..1003	gap2	ATCEA4C51495_1	96			g987979	57	126	8.1e-11	(X91248) high mobility group-like protein [Zinnia elegans]
149326	ATU011266	ATL8C44156:534..1	gap2	ATCEA4C27863_1	96			g3046705	57	215	3.8e-12	(AL022198) ribosomal protein S11 - like (partial) [Arabidopsis thaliana]
149327	ATU011267	ATL8C33230:621..1190	gap2	ATCEA4S30206	96	ATL8C33230:684..1077	0.93	g2281108	56	727	4.6e-59	(AC002333) endochitinase isolog [Arabidopsis

												thaliana]
149328	ATU011268	ATL8C39551:1147..2292	gap2	ATCEA4S11003	96	ATL8C39551:1188..2292	0.73	g3025445	56	134	6.8e-08	(AC004528) R32184_1 [Homo sapiens]
149329	ATU011269	ATL8S12442:1..488	gap2	ATCEA4C39719_1	96	ATL8S12442:9..90	0.62	g2244953	56	470	4.3e-47	(Z97340) ATsEH homolog [Arabidopsis thaliana]
149330	ATU011270	ATL8C3430:1..2421	gap2	ATCEA4C86025_1, ATCEA4S16855	96, 93	ATL8C3430:489..2314	0.55	g4914330	56	600	2.0e-62	(AC005489) F14N23.16 [Arabidopsis thaliana]
149331	ATU011271	ATL8C36553:787..1641	gap2	ATCEA4C21776_1	96			g4056433	56	393	1.1e-28	(AC005990) Similar to anter-specific proline-rich protein (CEX) gb|X60376 from Brassica napus. [Arabi

												dopsis thaliana]
149332	ATU011272	ATL8S16586:679..212	gap2	ATCEA4C478_1, ATCEA4S36118, ATCEA4S28394	96, 93, 86			g4455314	56	326	4.1e-06	(AL035528) glycine-rich RNA-binding protein AtGRP2-like [Arabidopsis thaliana]
149333	ATU011273	ATL8C15358:474..181	gap2	ATCEA4C71760_1	96	ATL8C15358:474..192	0.98	g2500376	55	241	9.5e-12	60S RIBOSOMAL PROTEIN L34 [Arabidopsis thaliana]
149334	ATU011274	ATL8C6071:596..1	gap2	ATCEA4C10096_1	96	ATL8C6071:172..36	0.92	g4826972	55	178	1.9e-12	RNA binding motif protein 8 [Homo sapiens]
149335	ATU011275	ATL8C33181:1..1781	gap2	ATCEA4S10778, ATCEA4S6106	96, 90	ATL8C33181:687..1642	0.90	g4049399	55	171	1.2e-13	(Y09581) FRO2 [Arabidopsis thaliana]
149336	ATU011	ATL8C3	gap2	ATCEA4	96	ATL8C3	0.76	g10017	55	598	1.2e-	(D6400

	276	2477:1168..70		S6041		2477:1168..70		08			66	4) NifS [Synechocystis sp.]
149337	ATU011277	ATL8C47005:3051..908	gap2	ATCEA4C26576_1	96	ATL8C47005:2893..990	0.73	g3980384	55	604	1.0e-60	(AC004561) hypothetical protein [Arabidopsis thaliana]
149338	ATU011278	ATL8C48295:2768..115	gap2	ATCEA4S9141, ATCEA4C58565_1, ATCEA4C48829_1, ATCEA4S35419, ATCEA4S32895, ATCEA4S9091	96, 95, 93, 89, 87, 84	ATL8C48295:2651..115	0.51	g1652134	55	83	1.1e-08	(D90903) FKBP-type peptidyl-prolyl cis-trans isomerase [Synechocystis sp.]
149339	ATU011279	ATL8C38807:1672..1	gap2	ATCEA4S30579, ATCEA4S2117	96, 94	ATL8C38807:1672..85	0.45	g4519417	55	250	6.9e-22	(AB024327) WD-40 repeat protein [Homo sapiens]
149340	ATU011280	ATL8C18386:1399..3021	gap2	ATCEA4C42739_1, ATCEA4	96, 86	ATL8C18386:1411..2851	0.40	g2160189	55	1092	1.4e-111	(AC000132) Similar to

				S12595								A. thaliana receptor-like protein kinase (gb|RLK5_ARATH). ESTs gb|ATTS0475, gb|ATTS4362 come from this gene. [Arabidopsis thaliana]
149341	ATU011281	ATL8C43305:1..798	gap2	ATCEA4C11098_1	96	ATL8C43305:98..738	0.99	g2191141	54	309		(AF007269) A_IG002N01.21 gene product [Arabidopsis thaliana]
149342	ATU011282	ATL8C26990:172..3094	gap2	ATCEA4S9352	96	ATL8C26990:172..2552	0.98	g729669	54	269	8.6e-07	HISTONE H2A [Pisum sativum]
149343	ATU011283	ATL8C36706:968..349	gap2	ATCEA4S8384	96	ATL8C36706:794..350	0.92	g3372230	54	332	9.7e-33	(AF017074) RNA polyme

												rase I, II and III 16.5 kDa subunit [Arabidopsis thaliana]
149344	ATU011284	ATL8S7869:625..1	gap2	ATCEA4C5227_1	96	ATL8S7869:518..106	0.90	g4874288	54	519	1.3e-44	(AC007212) putative peroxidase [Arabidopsis thaliana]
149345	ATU011285	ATL8C37237:1..2428	gap2	ATCEA4S32505, ATCEA4S1537	96, 82	ATL8C37237:63..2428	0.82	g3540207	54	983		(AC004260) Putative protein kinase [Arabidopsis thaliana]
149346	ATU011286	ATL8C25369:661..1	gap2	ATCEA4C73241_1, ATCEA4S16370	96, 93	ATL8C25369:291..24	0.66	g4895218	54	216	1.6e-15	(AC007660) hypothetical protein [Arabidopsis thaliana]
149347	ATU011287	ATL8S19295:1	gap2	ATCEA4C62839	96	ATL8S19295:1	0.57	g2708740	54	94	9.5e-08	(AC003952)

		10..531		_1		34..247						hypothetical protein [Arabidopsis thaliana]
149348	ATU011288	ATL8C15466:114..1779	gap2	ATCEA4C47593_1, ATCEA4S34332	96, 86	ATL8C15466:141..1655	0.48	g4877984	54	198	7.4e-14	(AF145755) THA4 [Zea mays]
149349	ATU011289	ATL8C42254:1..3618	gap2	ATCEA4C93835_1	96	ATL8C42254:1097..2533	0.41	g4544450	54	474	1.3e-52	(AC006592) hypothetical protein [Arabidopsis thaliana]
149350	ATU011290	ATL8C20688:1399..120	gap2	ATCEA4C475_1, ATCEA4C475_2	96, 95			g4006869	54	964	4.9e-78	(Z99707) patatin-like protein [Arabidopsis thaliana]
149351	ATU011291	ATL8C4238:621..1	gap2	ATCEA4C4825_2, ATCEA4S30537, ATCEA4C4825_1	96, 85, 83			g2808638	54	312	2.4e-20	(AJ001367) small GTP-binding protein [Daucus carota]

149352	ATU011292	ATL8C38100:276..3767	gap2	ATCEA4S14694, ATCEA4C26541_1	96, 95	ATL8C38100:364..3501	0.95	g4589610	53	282	3.3e-13	(AB023200) KIAA0983 protein [Homo sapiens]
149353	ATU011293	ATL8C10559:1..1453	gap2	ATCEA4C1711_1	96	ATL8C10559:63..1453	0.91	g3413425	53	770		(AJ006309) protein tyrosine phosphatase [Arabidopsis thaliana]
149354	ATU011294	ATL8C31265:151..2358	gap2	ATCEA4S36318	96	ATL8C31265:151..2205	0.86	g2576255	53	846	1.8e-79	(AJ001729) TH65 protein [Arabidopsis thaliana]
149355	ATU011295	ATL8C44356:1864..1	gap2	ATCEA4S11122	96	ATL8C44356:1856..22	0.84	g2160164	53	545	4.5e-43	(AC000132) No definition line found [Arabidopsis thaliana]
149356	ATU011296	ATL8C12541:80..2973	gap2	ATCEA4C4049_2, ATCEA4	96, 92, 91, 85	ATL8C12541:169..2589	0.82	g549629	53	90	0.20	HYPOTHETICAL 39.4 KD

				S33723, ATCEA4C4049_1, ATCEA4S31436								PROTEIN IN MET1-SIS2 INTERGENIC REGION [Saccharomyces cerevisiae]
149357	ATU011297	ATL8C17119:890..2511	gap2	ATCEA4C35602_1	96	ATL8C17119:1223..2093	0.81	g4580462	53	1457	8.2e-113	(AC006081) hypothetical protein [Arabidopsis thaliana]
149358	ATU011298	ATL8C17986:990..69	gap2	ATCEA4C17068_1, ATCEA4S8351	96, 84	ATL8C17986:904..69	0.77	g3334441	53	353		HYPOTHETICAL 47.9 KD PROTEIN T5I7.9 IN CHROMOSOME II [Arabidopsis thaliana]
149359	ATU011299	ATL8C38381:1..718	gap2	ATCEA4S27246, ATCEA4C122572_1	96, 91	ATL8C38381:60..688	0.46	g4581143	53	290	4.0e-23	(AC006919) hypothetical protein [Arabidopsis

												thaliana]
149360	ATU011300	ATL8C1:1196..1	gap2	ATCEA4C2545_1, ATCEA4C19426_1	96, 93			g2642158	53	680	2.6e-67	(AC003000) hypothetical protein [Arabidopsis thaliana]
149361	ATU011301	ATL8C13758:1074..728	gap2	ATCEA4S8303	96			g4455358	53	504	1.5e-48	(AL035524) putative protein [Arabidopsis thaliana]
149362	ATU011302	ATL8C27439:626..1	gap2	ATCEA4C110098_1	96			g548530	53	68		PROBABLE PHOSPHOGLYCERATE MUTASE 2 (PHOSPHOGLYCEROMUTASE 2) (PGAM 2) (BPG-DEPENDENT PGAM 2) []
149363	ATU011303	ATL8C12702:3316..1	gap2	ATCEA4C14397_1, ATCEA4S26035	96, 93, 92, 84	ATL8C12702:3316..153	0.95	g4581856	52	744	1.8e-61	(AF116825) 1-deoxy-D-

				, ATCEA4 C4905_ 1, ATCEA4 C14397 _2								xylulo se-5- phosph ate reduct oisome rase [Menth a x piperi ta]
149364	ATU011 304	ATL8C2 1894:1 876..1 47	gap2	ATCEA4 S29596 , ATCEA4 C6571_ 1, ATCEA4 C3460_ 1	96, 92, 88	ATL8C2 1894:1 855..1 47	0.88	g27022 81	52	925	7.3e- 68	(AC003 033) putati ve protei n disulf ide isomer ase precur sor [Arabi dopsis thalia na]
149365	ATU011 305	ATL8C2 3900:1 545..1	gap2	ATCEA4 C4388_ 1, ATCEA4 C4885_ 1	96, 84	ATL8C2 3900:1 437..8 0	0.84	g23887 10	52	780	4.0e- 65	(AF017 150) betain e aldehy de dehydr ogenas e [Amara nthus hypoch ondria cus]
149366	ATU011 306	ATL8C2 8165:1 ..1545	gap2	ATCEA4 C720_1	96	ATL8C2 8165:2 75..15 45	0.75	g32014 77	52	1182	2.1e- 104	(AJ006 021) putati ve

												PRL1 associated protein [Arabidopsis thaliana]
149367	ATU011307	ATL8C1901:501..2928	gap2	ATCEA4C72405_1	96	ATL8C1901:993..2909	0.68	g4733959	52	1566	3.1e-101	(AC007294) putative glucose inhibited division protein A [Arabidopsis thaliana]
149368	ATU011308	ATL8C32443:2302..1450	gap2	ATCEA4C5948_1	96	ATL8C32443:2100..1450	0.66	g3885331	52	768	2.8e-70	(AC005623) putative cytochrome p450 protein [Arabidopsis thaliana]
149369	ATU011309	ATL8C7289:1..404	gap2	ATCEA4C37855_1	96			g2829898	52	288	5.0e-25	(AC002311) Hypothetical protein [Arabi

												dopsis thaliana]
149370	ATU011310	ATL8S17528:105..457	gap2	ATCEA4C120327_1	96			g3885344	52	500	5.2e-42	(AC005623) unknown protein [Arabidopsis thaliana]
149371	ATU011311	ATL8S3512:19..522	gap2	ATCEA4S31955	96	ATL8S3512:87..426	0.96	g3402702	51	133	1.4e-11	(AC004261) unknown protein [Arabidopsis thaliana]
149372	ATU011312	ATL8C17240:1881..4582	gap2	ATCEA4C19612_1, ATCEA4C7336_1	96, 93	ATL8C17240:2071..4184	0.92	g2499804	51	292	8.9e-22	PROTEIN ARGININE N-METHYLTRANSFERASE 1 [Rattus norvegicus]
149373	ATU011313	ATL8C47185:1431..1	gap2	ATCEA4C37414_1	96	ATL8C47185:1426..581	0.86	g4249382	51	840	8.0e-70	(AC005966) Strong similarity to [Arabidopsis thaliana]

149374	ATU011314	ATL8C30867:1627..1104	gap2	ATCEA4C1605_1	96	ATL8C30867:1490..1258	0.77	g2511546	51	585	3.3e-40	(AF022658) putative c2h2 zinc finger transcription factor [Arabidopsis thaliana]
149375	ATU011315	ATL8C39015:1..877	gap2	ATCEA4S14794	96	ATL8C39015:72..691	0.70	g2239089	51	208	1.7e-17	(Z84386) anthranilate N-hydroxycinnamoyl/benzoyltransferase [Dianthus caryophyllus]
149376	ATU011316	ATL8C10753:1..665	gap2	ATCEA4C1359_1, ATCEA4S30961	96, 92	ATL8C10753:180..536	0.64	g2129636	51	830	7.2e-87	lipase - Arabidopsis thaliana [Arabidopsis thaliana]
149377	ATU011317	ATL8C4848:1..1416	gap2	ATCEA4C35180_1, ATCEA4	96, 96, 92, 83	ATL8C4848:128..1220	0.41	g4826399	51	1521	9.5e-162	(AJ012423) wall-associ

				S32276, ATCEA4S24568, ATCEA4C233_1								ated kinase 2 [Arabidopsis thaliana]
149378	ATU011318	ATL8S29475:483..1	gap2	ATCEA4S3269	96			g4584255	51	168	1.7e-17	(Y18471) SINA1p [Vitis vinifera]
149379	ATU011319	ATL8C16055:389..667	gap2	ATCEA4C8579_1	96			g4587567	51	146	1.8e-10	(AC006550) F10O3.7 [Arabidopsis thaliana]
149380	ATU011320	ATL8C40273:780..1	gap2	ATCEA4S2885, ATCEA4C13496_1, ATCEA4S23589	96, 90, 86			g3176664	51	190	6.1e-10	(AC004393) Contains similarity to beta scruin gb|Z47541 from Limulus polyphemus. ESTs gb|T04493 and gb|AA585955 come from

												this gene. [Arabidopsis thaliana]
149381	ATU011321	ATL8C24771:1716..1	gap2	ATCEA4C6800_1	96			g3894157	51	2082	2.7e-175	(AC005312) putative protein kinase, 3' partial [Arabidopsis thaliana]
149382	ATU011322	ATL8C37170:1594..3685	gap2	ATCEA4C14258_1, ATCEA4S36175	96, 94	ATL8C37170:1654..2905	0.97	g2982464	50	271		(AL022223) putative protein [Arabidopsis thaliana]
149383	ATU011323	ATL8C34965:1..735	gap2	ATCEA4C1449_1	96	ATL8C34965:44..539	0.95	g3914521	50	441	1.0e-45	RAS-RELATED PROTEIN RAB7 [Arabidopsis thaliana]
149384	ATU011324	ATL8S6860:428..1	gap2	ATCEA4S30168	96	ATL8S6860:190..64	0.93	g2281108	50	614		(AC002333) endochitinase isolog

												[Arabidopsis thaliana]
149385	ATU011325	ATL8C36124:303..1	gap2	ATCEA4C96_1	96	ATL8C36124:300..69	0.93	g438453	50	435	1.6e-26	(L22786) GL1 mutant [Arabidopsis thaliana]
149386	ATU011326	ATL8C33396:1..654	gap2	ATCEA4C47697_1	96	ATL8C33396:52..477	0.93	g2947067	50	198	5.6e-21	(AC002521) hypothetical protein [Arabidopsis thaliana]
149387	ATU011327	ATL8C34230:2526..1	gap2	ATCEA4S16136	96	ATL8C34230:2429..201	0.85	g3287695	50	807	1.2e-74	(AC003979) Similar to hypothetical protein C34B7.2 gb|1729503 from C. elegans cosmid gb|Z83220. [Arabidopsis thaliana]
149388	ATU011	ATL8C2	gap2	ATCEA4	96,	ATL8C2	0.57	g34618	50	436	3.6e-	(AC005

	328	8630:1..653		C40545_2, ATCEA4S36065, ATCEA4S34150	88, 84	8630:204..567		45			13	315) hypothetical protein [Arabidopsis thaliana]
149389	ATU011329	ATL8C2862:375..1	gap2	ATCEA4S2730	96			g3860797	50	112	1.5e-06	(AJ235271) 30S RIBOSOMAL PROTEIN S9 (rpsI) [Rickettsia prowazekii]
149390	ATU011330	ATL8C32384:1435..1	gap2	ATCEA4C101526_1, ATCEA4C21771_1, ATCEA4S35311, ATCEA4S11955	96, 94, 90, 84	ATL8C32384:961..12	0.91	g4467096	49	1774	4.2e-177	(AL035538) putative protein [Arabidopsis thaliana]
149391	ATU011331	ATL8C35995:1256..1	gap2	ATCEA4C14565_1, ATCEA4S30726	96, 91	ATL8C35995:1247..21	0.86	g1653665	49	379	7.7e-39	(D90915) peptide chain release factor [Synechocystis sp.]
149392	ATU011	ATL8C1	gap2	ATCEA4	96	ATL8C1	0.78	g36886	49	1018	2.3e-	(AB009

	332	2236:1872..30		C100162_1		2236:1795..93		02			92	031) Oxidosqualene Cyclase [Panax ginseng]
149393	ATU011333	ATL8S13026:557..1	gap2	ATCEA4C24258_1, ATCEA4C19370_1	96, 82	ATL8S13026:472..209	0.66	g3935143	49	489	8.2e-35	(AC005106) T25N20.7 [Arabidopsis thaliana]
149394	ATU011334	ATL8C28293:409..1	gap2	ATCEA4S10969, ATCEA4C15530_1	96, 94	ATL8C28293:267..11	0.58	g3980386	49	351	3.9e-34	(AC004561) putative glutathione S-transferase [Arabidopsis thaliana]
149395	ATU011335	ATL8C23786:1..1513	gap2	ATCEA4C117538_1	96	ATL8C23786:59..972	0.50	g3850113, g4741896	49, 35	557, 120	3.8e-60, 7.0e-08	(AL033388) hypothetical integral membrane protein [Schizosaccharomyces pombe]

												; (AF127042) 60S ribosomal protein L37a [Gossypium hirsutum]
149396	ATU011336	ATL8C17493:1244..1	gap2	ATCEA4C67672_1, ATCEA4S4788	96, 94	ATL8C17493:1244..141	0.49	g3169174	49	461	1.6e-43	(AC004401) putative serine carboxypeptidase I [Arabidopsis thaliana]
149397	ATU011337	ATL8C37482:513..4288	gap2	ATCEA4C3895_1	96	ATL8C37482:2761..4179	0.42	g4263522	49	455		(AC004044) hypothetical protein [Arabidopsis thaliana]
149398	ATU011338	ATL8C18825:3401..2013	gap2	ATCEA4C122762_1, ATCEA4C6093_1	96, 82			g3355480	49	258	2.3e-24	(AC004218) Medicago nodulin N21-like protein [Arabidopsis

												thaliana]
149399	ATU011339	ATL8C6585:1..615	gap2	ATCEA4S31194	96			g2980793	49	524	6.7e-42	(AL022197) putative protein [Arabidopsis thaliana]
149400	ATU011340	ATL8C32941:1117..179	gap2	ATCEA4C17037_1, ATCEA4C21813_1	96, 82			g4056499	49	159	1.8e-12	(AC005896) unknown protein [Arabidopsis thaliana]
149401	ATU011341	ATL8C19107:224..984	gap2	ATCEA4C118623_1	96			g4371280	49	178	2.8e-06	(AC006260) hypothetical protein [Arabidopsis thaliana]
149402	ATU011342	ATL8C13860:1520..105	gap2	ATCEA4C952_1	96	ATL8C13860:1476..105	0.92	g135535	48	1009	7.4e-97	T-COMPLEX PROTEIN 1, ALPHA SUBUNIT (TCP-1-ALPHA) (CCT-ALPHA)

												[Arabidopsis thaliana]
149403	ATU011343	ATL8C11264:958..444	gap2	ATCEA4S7375	96	ATL8C11264:879..444	0.91	g1871184	48	139	1.2e-06	(U90439) unknown protein [Arabidopsis thaliana]
149404	ATU011344	ATL8C46730:773..1184	gap2	ATCEA4S27386	96	ATL8C46730:1093..879	0.79	g3298537	48	224	2.6e-21	(AC004681) hypothetical protein [Arabidopsis thaliana]
149405	ATU011345	ATL8C13198:3118..1271	gap2	ATCEA4C28622_1, ATCEA4S31821, ATCEA4S31874, ATCEA4S33745, ATCEA4S26526	96, 94, 93, 91, 88	ATL8C13198:2908..1271	0.77	g4558659	48	1363	4.4e-134	(AC007063) unknown protein [Arabidopsis thaliana]
149406	ATU011346	ATL8C41776:4982..1	gap2	ATCEA4S12669	96	ATL8C41776:2643..538, ATL8C41776:4982..3	0.65, 0.86	g4325354	48	2364	8.1e-249	(AF128395) contains similarity to

						357						retrovirus-related polyproteins and to CCHC zinc finger protein (Pfam: PF00098, Score=16.3, E=0.051, E=1) [Arabidopsis thaliana]
149407	ATU011347	ATL8C13925:2082..2579	gap2	ATCEA4S25917, ATCEA4S34637	96, 91	ATL8C13925:2122..2376	0.61	g1346724	48	416	4.6e-40	FLORAL HOMEOTIC PROTEIN PISTILLATA [Arabidopsis thaliana]
149408	ATU011348	ATL8S17152:1..550	gap2	ATCEA4S3695	96			g4678280	48	913	3.8e-22	(AL049660) zinc finger-like protein [Arabidopsis thalia

												na]
149409	ATU011349	ATL8S2858:563..1	gap2	ATCEA4S13935, ATCEA4C23291_1	96, 84			g2462840	48	110	5.5e-08	(AF000657) cytochrome C [Arabidopsis thaliana]
149410	ATU011350	ATL8C42030:2076..1	gap2	ATCEA4S1996, ATCEA4C33178_1, ATCEA4S9061	96, 95, 84			g4759280	48	1101	2.1e-156	U5 snRNP-specific protein, 116 kD [Homo sapiens]
149411	ATU011351	ATL8C49087:1..1561	gap2	ATCEA4S6640, ATCEA4C22535_1	96, 92			g927577	48	534	7.4e-44	(U12927) alpha-galactosidase [Phaseolus vulgaris]
149412	ATU011352	ATL8C4553:473..858	gap2	ATCEA4S29882	96	ATL8C4553:473..834	0.84	g3935140	47	147	3.2e-10	(AC005106) T25N20.4 [Arabidopsis thaliana]
149413	ATU011353	ATL8C46889:2467..1383	gap2	ATCEA4C30985_1	96	ATL8C46889:1960..1383	0.80	g3548802	47	896	6.1e-36	(AC005313) axi 1-like protein [Arabi

												dopsis thaliana]
149414	ATU011354	ATL8C26389:1699..1	gap2	ATCEA4C5142_2	96	ATL8C26389:1440..35	0.70	g4894630	47	180	3.9e-11	(AF124370) NT6 [Nicotiana tabacum]
149415	ATU011355	ATL8C4208:536..1	gap2	ATCEA4C25490_1	96	ATL8C4208:488..174	0.55	g3650028	47	473	8.0e-39	(AC005396) putative 22 kDa peroxisomal membrane protein [Arabidopsis thaliana]
149416	ATU011356	ATL8C46650:931..1	gap2	ATCEA4C75160_1	96	ATL8C46650:896..6	0.44	g3063691	47	1325	9.2e-130	(AL022537) putative protein [Arabidopsis thaliana]
149417	ATU011357	ATL8C21530:706..129	gap2	ATCEA4S33156	96			g2342439	47	706	6.1e-71	(AB006058) acidic endochitinase [Arabidopsis thaliana]

149418	ATU011358	ATL8C13144:68..1977	gap2	ATCEA4S252	96	ATL8C13144:74..875	0.99	g2191196, g4726116, g3695409	46, 32, 30	128, 205, 258	2.4e-08, 1.1e-07, 2.3e-13	(AF007271) contains a MADS domain [Arabidopsis thaliana]; (AC006436) hypothetical protein [Arabidopsis thaliana]; (AF096373) No definition line found [Arabidopsis thaliana]
149419	ATU011359	ATL8C36796:2079..1	gap2	ATCEA4S803	96	ATL8C36796:2058..521	0.97	g1495804	46	1234	2.1e-105	(X96406) 13-lipoxygenase [Solanum tuberosum]
149420	ATU011360	ATL8C33195:1900..6038	gap2	ATCEA4S22116	96	ATL8C33195:2485..4813	0.93	g3242708	46	604	3.3e-70	(AC003040) putative serine/threo

												nine protein kinase [Arabidopsis thaliana]
149421	ATU011361	ATL8C1290:1421..1	gap2	ATCEA4S36310	96	ATL8C1290:1340..69	0.82	g1709740	46	1207	6.5e-87	POLY (ADP-RIBOSE) POLYMERASE (PARP) (ADPRT) (NAD(+) ADP-RIBOSYLTRANSFERÀSE) (POLY(ADP-RIBOSE) SYNTHETASE) [Arabidopsis thaliana]
149422	ATU011362	ATL8C1466:853..1626	gap2	ATCEA4C4754_1	96	ATL8C1466:960..1370	0.72	g4589962	46	643	6.1e-66	(AC007169) putative fructokinase [Arabidopsis thaliana]
149423	ATU011363	ATL8C47479:1	gap2	ATCEA4C9505	96	ATL8C47479:2	0.59	g3250697	46	670	2.5e-68	(AL024486)

		..750		1		71..713						putative protein [Arabidopsis thaliana]
149424	ATU011364	ATL8C10161:1..1158	gap2	ATCEA4C121194_1, ATCEA4C4619_1	96, 93	ATL8C10161:265..862	0.55	g2864615	46	1842		(AL021811) putative protein [Arabidopsis thaliana]
149425	ATU011365	ATL8C49940:1094..1	gap2	ATCEA4S10843, ATCEA4C31663_1, ATCEA4S10844, ATCEA4S14508	96, 95, 88, 88	ATL8C49940:994..394	0.55	g2252863	46	452	1.4e-30	(AF013294) similar to nucleolin protein [Arabidopsis thaliana]
149426	ATU011366	ATL8C9796:2331..3120	gap2	ATCEA4C116235_1	96			g3212867	46	570	1.1e-41	(AC004005) unknown protein [Arabidopsis thaliana]
149427	ATU011367	ATL8C34879:2034..1	gap2	ATCEA4C8540_1	96	ATL8C34879:1296..332	0.96	g459009	45	508	3.0e-46	(U00037) similar to multif

												unctional aminoacyl-tRNA synthetase, especially to the prolyl-tRNA synthetase region [Caenorhabditis elegans]
149428	ATU011368	ATL8C42752:69..720	gap2	ATCEA4C14407_2, ATCEA4C14407_1	96, 96	ATL8C42752:149..474	0.87	g2827712	45	433	2.1e-33	(AL021684) endoxyloglucan tranferase-like protein [Arabidopsis thaliana]
149429	ATU011369	ATL8C40121:1..1359	gap2	ATCEA4C101606_1, ATCEA4S1439	96, 89	ATL8C40121:147..1302	0.81	g4262167	45	1509	6.9e-145	(AC005275) putative LRR receptor-linked protein kinase [Arabi

												dopsis thaliana]
149430	ATU011370	ATL8C18569:1286..1	gap2	ATCEA4C6128_1	96	ATL8C18569:1231..115	0.78	g2829892	45	265	8.9e-19	(AC002311) putative pectin esterase [Arabidopsis thaliana]
149431	ATU011371	ATL8C16026:1..607	gap2	ATCEA4C121213_1	96	ATL8C16026:174..454	0.59	g2190543	45	441	1.9e-49	(AC001229) EST gb|N37484 comes from this gene. [Arabidopsis thaliana]
149432	ATU011372	ATL8C26457:545..957	gap2	ATCEA4C236_1	96	ATL8C26457:621..924	0.58	g114085	45	439	9.6e-41	RAS-RELATED PROTEIN ARA-1 [Arabidopsis thaliana]
149433	ATU011373	ATL8C16134:1..832	gap2	ATCEA4C5892_2, ATCEA4C5892_1	96, 94	ATL8C16134:66..652	0.54	g4678352	45	517	1.0e-53	(AL049659) putative protein [Arabidopsis

												thaliana]
149434	ATU011374	ATL8C14424:5173..6613	gap2	ATCEA4S169	96			g3377517	45	900	5.2e-70	(AF073361) nitrate transporter NTL1 [Arabidopsis thaliana]
149435	ATU011375	ATL8C18920:3302..1684	gap2	ATCEA4S32350, ATCEA4S10145	96, 83			g2160159	45	180	1.5e-09	(AC000132) F21M12.4 gene product [Arabidopsis thaliana]
149436	ATU011376	ATL8C2803:1..675	gap2	ATCEA4S30240, ATCEA4S4136	96, 90	ATL8C2803:163..675	0.96	g3980397	44	559	1.7e-46	(AC004561) putative protein phosphatase 2C [Arabidopsis thaliana]
149437	ATU011377	ATL8C24648:1113..1	gap2	ATCEA4S1770, ATCEA4S29626	96, 87	ATL8C24648:874..60	0.90	g3746059	44	527	5.1e-64	(AC005311) putative cysteinyl-tRNA synthe

												tase [Arabidopsis thaliana]
149438	ATU011378	ATL8C35147:1..1267	gap2	ATCEA4S33134, ATCEA4S35867	96, 87	ATL8C35147:163..1135	0.87	g2827646	44	1275	1.4e-101	(AL021637) downy mildew resistance-like protein [Arabidopsis thaliana]
149439	ATU011379	ATL8C43289:1059..1	gap2	ATCEA4S9427	96	ATL8C43289:862..183	0.79	g3859116	44	432	2.5e-41	(AF031609) unknown [Oryza sativa]
149440	ATU011380	ATL8C49314:55..1608	gap2	ATCEA4S36270, ATCEA4C668_1, ATCEA4C668_3	96, 96, 94	ATL8C49314:101..1587	0.73	g4204912	44	1257	1.5e-90	(U58918) MEK kinase [Arabidopsis thaliana]
149441	ATU011381	ATL8C9705:546..1	gap2	ATCEA4C43235_1, ATCEA4C86290_1	96, 88	ATL8C9705:443..151	0.69	g4741186	44	211	1.0e-21	(AL049746) putative protein [Arabidopsis thaliana]
149442	ATU011	ATL8C4	gap2	ATCEA4	96, 83	ATL8C4	0.53	g22448	44	1904	1.3e-	(Z9733

	382	8065:1361..1		S11760, ATCEA4C2042_1		8065:1282..66		98			199	8) strong similarity to protein phosphatase 2A regulatory chain, 74K [Arabidopsis thaliana]
149443	ATU011383	ATL8C48120:408..2022	gap2	ATCEA4C15678_1, ATCEA4S1575	96, 95	ATL8C48120:683..1988	0.50	g3367517	44	836	1.9e-69	(AC004392) Similar to F4I1.26 putative beta-glucosidase [Arabidopsis thaliana]
149444	ATU011384	ATL8C31324:1468..2155	gap2	ATCEA4C23308_1	96	ATL8C31324:2084..1755	0.47	g1730616	44	272	9.6e-22	HYPOTHETICAL 32.4 KD PROTEIN IN TAF40-ERV25 INTERGENIC REGION [Sacch

												aromyces cerevisiae]
149445	ATU011385	ATL8C38966:812..1	gap2	ATCEA4C120445_1	96	ATL8C38966:768..363	0.98	g2988398	43	57	0.0018	(AC004381) Unknown gene product [Homo sapiens]
149446	ATU011386	ATL8C20639:1..2220	gap2	ATCEA4C18132_1	96	ATL8C20639:93..2046	0.88	g401013	43	320	4.4e-37	DNA-DIRECTED RNA POLYMERASE II 138 KD POLYPEPTIDE (RNA POLYMERASE II SUBUNIT 2) [Schizosaccharomyces pombe]
149447	ATU011387	ATL8C40970:757..1	gap2	ATCEA4C107472_1, ATCEA4C6400_1	96, 89	ATL8C40970:700..57	0.82	g2245037	43	674	5.7e-57	(Z97342) nuclear antigen homolog [Arabidopsis thaliana]

149448	ATU011388	ATL8C16177:1..1747	gap2	ATCEA4C57253_1	96	ATL8C16177:191..1685	0.81	g4321799	43	242	1.8e-15	(AF062387) TAP2 protein [Xenopus laevis]
149449	ATU011389	ATL8C17667:1059..1	gap2	ATCEA4S5899, ATCEA4S35625, ATCEA4S10446	96, 89, 84	ATL8C17667:748..311	0.77	g2462825	43	376	2.4e-40	(AF000657) contains Procite 'RNP1' putative RNA-binding region [Arabidopsis thaliana]
149450	ATU011390	ATL8C12113:5927..1	gap2	ATCEA4S664, ATCEA4S6048, ATCEA4C34644_1, ATCEA4S34211	96, 95, 90, 83	ATL8C12113:5927..97	0.69	g3776557	43	336	5.9e-94	(AC005388) Contains similarity to [Arabidopsis thaliana]
149451	ATU011391	ATL8C32936:2169..596	gap2	ATCEA4C6445_3, ATCEA4S12515, ATCEA4C6445	96, 92, 89	ATL8C32936:2082..596	0.48	g2911055, g3878412	43, 33	477, 70	4.2e-49, 2.2e-05	(AL021961) putative protein [Arabidopsis

				1								thaliana]; (Z77666) cDNA EST EMBL:T01059 comes from this gene; cDNA EST EMBL:D71534 comes from this gene; cDNA EST EMBL:D74514 comes from this gene; cDNA EST EMBL:D66796 comes from this gene; cDNA EST EMBL:C11630 comes from this gene; cDN...

												[]
149452	ATU011392	ATL8C4086:2691..2651	gap2	ATCEA4S1094	96	ATL8C4086:333..2413	0.41	g2496830	43	195	2.5e-13	HYPOTHETICAL 98.3 KD PROTEIN B0495.7 IN CHROMOSOME II [Caenorhabditis elegans]
149453	ATU011393	ATL8S3277:467..1	gap2	ATCEA4C6483_1	96	ATL8S3277:363..220	0.41	g4678309	43	283	5.9e-27	(AL049655) small GTP-binding protein-like (fragment) [Arabidopsis thaliana]
149454	ATU011394	ATL8C46140:1..607	gap2	ATCEA4S11443	96			g3859598	43	599	1.5e-40	(AF104919) contains similarity to Myb DNA-binding domains (Pfam: PF0024

												9, E=3.7e-27 N=3) [Arabidopsis thaliana]
149455	ATU011395	ATL8C9540:703..1223	gap2	ATCEA4S26174, ATCEA4S30997, ATCEA4S34386	96, 91, 91			g3868859	43	538	2.3e-43	(AB013887) RAV2 [Arabidopsis thaliana]
149456	ATU011396	ATL8C21920:1367..1	gap2	ATCEA4S15054	96	ATL8C21920:1177..382	0.90	g3334739	42	222	1.5e-12	(AJ005892) JM23 [Homo sapiens]
149457	ATU011397	ATL8C45683:113..961	gap2	ATCEA4S31692, ATCEA4C1077_1	96, 95	ATL8C45683:191..953	0.86	g3004558	42	603	2.5e-45	(AC003673) peroxidase ATP22a [Arabidopsis thaliana]
149458	ATU011398	ATL8C31926:304..3077	gap2	ATCEA4S3334, ATCEA4C60307_1	96, 95	ATL8C31926:429..2757	0.83	g2981265	42	114	7.2e-08	(AC004460) similar to golgi antigen; similar to U50078 (PID:g1477565) [Homo

												sapiens]
149459	ATU011399	ATL8C32996:41..634	gap2	ATCEA4C117473_1	96	ATL8C32996:113..392	0.81	g2494120	42	164	4.2e-12	(AC002376) Similar to Synechocystis integral membrane protein (gb|D64002). [Arabidopsis thaliana]
149460	ATU011400	ATL8C45631:1397..1	gap2	ATCEA4S9366	96	ATL8C45631:1281..115	0.78	g2388574	42	457	5.2e-40	(AC000098) Strong similarity to Phalaenopsis homeobox protein (gb|U34743). [Arabidopsis thaliana]
149461	ATU011401	ATL8S7354:411..1	gap2	ATCEA4C273_1	96	ATL8S7354:276..12	0.76	g4325282	42	496	7.8e-43	(AF123310) NAC domain protein NAM

												[Arabidopsis thaliana]
149462	ATU011402	ATL8C16270:1577..69	gap2	ATCEA4S2458	96	ATL8C16270:1577..192	0.75	g1399648	42	62	0.18	(U53455) chloride ion current inducer protein [Mus musculus]
149463	ATU011403	ATL8C48788:1723..1	gap2	ATCEA4C22906_1, ATCEA4S1609	96, 95	ATL8C48788:1625..970	0.72	g2244831	42	828	6.8e-74	(Z97337) hypothetical protein [Arabidopsis thaliana]
149464	ATU011404	ATL8C11721:679..1	gap2	ATCEA4C6276_1	96	ATL8C11721:590..68	0.66	g4512685	42	286	2.7e-28	(AC006931) hypothetical protein [Arabidopsis thaliana]
149465	ATU011405	ATL8C35844:746..1	gap2	ATCEA4C18079_1, ATCEA4C20905_1	96, 82	ATL8C35844:746..246	0.54	g1314711	42	913	1.4e-82	(U54615) calcium-dependent protein

												kinase [Arabidopsis thaliana]
149466	ATU011406	ATL8S4860:1..489	gap2	ATCEA4C13930_1, ATCEA4S1687	96, 95	ATL8S4860:63..342	0.51	g2832669	42	683	7.8e-62	(AL021712) hypothetical protein [Arabidopsis thaliana]
149467	ATU011407	ATL8C29046:629..1	gap2	ATCEA4S29783	96	ATL8C29046:471..26	0.50	g2618699	42	611	1.2e-56	(AC002510) unknown protein [Arabidopsis thaliana]
149468	ATU011408	ATL8C26940:1..500	gap2	ATCEA4S34844	96	ATL8C26940:189..314	0.50	g4884033	42	366	1.2e-35	(AJ133753) peptide methionine sulfoxide reductase [Arabidopsis thaliana]
149469	ATU011409	ATL8S21500:1..525	gap2	ATCEA4C125656_2	96	ATL8S21500:102..495	0.43	g4538928	42	224	1.7e-15	(AL049483) putative protein

												[Arabidopsis thaliana]
149470	ATU011410	ATL8C49922:1614..2240	gap2	ATCEA4C252_1	96			g3882356	42	753	5.0e-76	(U92460) 12-oxophytodienoate reductase OPR2 [Arabidopsis thaliana]
149471	ATU011411	ATL8C39074:1..600	gap2	ATCEA4S26081	96			g629669	42	528	2.4e-50	hypothetical protein - tomato []
149472	ATU011412	ATL8C33764:695..1246	gap2	ATCEA4C44950_1	96	ATL8C33764:774..988	0.95	g4263519	41	92	7.9e-08	(AC004044) small nuclear riboprotein Sm-D1 [Arabidopsis thaliana]
149473	ATU011413	ATL8C8867:1..1370	gap2	ATCEA4S2076, ATCEA4S31925	96, 90	ATL8C8867:143..1320	0.92	g3176726	41	1454	1.6e-146	(AC002392) putative serine proteinase [Arabidopsis thaliana]

149474	ATU011414	ATL8C65:1256..1	gap2	ATCEA4C7142_1, ATCEA4C7142_2	96, 92	ATL8C65:1232..280	0.92	g1209756	41	505	2.7e-29	(U43629) integral membrane protein [Beta vulgaris]
149475	ATU011415	ATL8C46831:1..1686	gap2	ATCEA4C17345_1, ATCEA4S35099, ATCEA4S35969	96, 92, 85	ATL8C46831:501..1531	0.89	g4240169	41	101	3.7e-07	(AB020647) KIAA0840 protein [Homo sapiens]
149476	ATU011416	ATL8C24668:1508..70	gap2	ATCEA4C889_1, ATCEA4S30895, ATCEA4S31160	96, 95, 85	ATL8C24668:1449..198	0.86	g1171978	41	1133	9.9e-89	POLYADENYLATE-BINDING PROTEIN 2 (POLY(A) BINDING PROTEIN 2) (PABP 2) [Arabidopsis thaliana]
149477	ATU011417	ATL8C37848:104..1110	gap2	ATCEA4S2003, ATCEA4C33357_1	96, 84	ATL8C37848:115..1061	0.85	g3810835	41	88	1.9e-07	(AL032684) putative RNA-bindin

												g protein [Schizosaccharomyces pombe]
149478	ATU011418	ATL8C21879:949..1	gap2	ATCEA4S3018, ATCEA4C28211_1, ATCEA4S19036	96, 96, 86	ATL8C21879:792..18	0.82	g4115381	41	1122	2.8e-73	(AC005967) putative limonene cyclase [Arabidopsis thaliana]
149479	ATU011419	ATL8C34294:1439..1	gap2	ATCEA4C84535_2, ATCEA4C84535_1	96, 91	ATL8C34294:1357..166	0.79	g4732123	41	469	6.6e-48	(AF129087) mitogen-activated protein kinase homologue [Medicago sativa]
149480	ATU011420	ATL8C3329:458..1341	gap2	ATCEA4C17362_1	96	ATL8C3329:458..1196	0.71	g2623303	41	413	2.4e-39	(AC002409) putative cytochrome P450 [Arabidopsis thalia

												na]
149481	ATU011421	ATL8C48442:1012..1	gap2	ATCEA4C12365_1, ATCEA4S4622	96, 83	ATL8C48442:805..300	0.66	g3695378	41	593	2.8e-48	(AF096370) contains similarity to NAM (no apical meristem) - like proteins [Arabidopsis thaliana]
149482	ATU011422	ATL8C11633:1..1399	gap2	ATCEA4S3983, ATCEA4C36529_1	96, 92	ATL8C11633:1221..774	0.57	g2160144	41	876	8.0e-80	(AC000375) Strong similarity to Arabidopsis oligopeptide transporter (gb|X77503). [Arabidopsis thaliana]
149483	ATU011423	ATL8C26075:418..925	gap2	ATCEA4S31356	96	ATL8C26075:498..925	0.53	g1871577	41	131	5.2e-12	(Y11553) putative 21kD protein precur

												sor [Medicago sativa]
149484	ATU011424	ATL8C15561:2194..1	gap2	ATCEA4C32930_1	96	ATL8C15561:2097..1173	0.53	g2316016	41	1396	1.1e-139	(U92650) MRP-like ABC transporter [Arabidopsis thaliana]
149485	ATU011425	ATL8S10828:1..639	gap2	ATCEA4C48260_1	96			g3236240	41	742	2.7e-73	(AC004684) unknown protein [Arabidopsis thaliana]
149486	ATU011426	ATL8S23427:58..465	gap2	ATCEA4S1561	96			g2252824	41	467	3.2e-28	(AF013293) No definition line found [Arabidopsis thaliana]
149487	ATU011427	ATL8C49315:1976..1754	gap2	ATCEA4C125569_1, ATCEA4S27542	96, 89			g2832656	41	149	2.0e-10	(AL021710) hypothetical protein [Arabidopsis

												thaliana]
149488	ATU011428	ATL8C47247:1..939	gap2	ATCEA4C2174_1	96	ATL8C47247:150..939	0.99	g1076442	40	891	1.5e-90	beta-glucosidase (EC 3.2.1.21) - rape [Brassica napus]
149489	ATU011429	ATL8C18127:1..987	gap2	ATCEA4S10859, ATCEA4C1960_4	96, 84	ATL8C18127:62..766	0.93	g4204266	40	845	8.9e-88	(AC005223) 52263 [Arabidopsis thaliana]
149490	ATU011430	ATL8C46593:3582..1	gap2	ATCEA4C479_1	96	ATL8C46593:3216..388	0.91	g4678317	40	1552	3.8e-127	(AL049658) aminoacyl-t-RNA synthetase [Arabidopsis thaliana]
149491	ATU011431	ATL8C30013:1..1237	gap2	ATCEA4S30002	96	ATL8C30013:128..1227	0.87	g2961357	40	737	1.8e-46	(AL022140) putative protein [Arabidopsis thaliana]
149492	ATU011432	ATL8C26080:1..3377	gap2	ATCEA4C27070_1, ATCEA4	96, 84	ATL8C26080:80..2000,	0.79, 0.74	g1234787	40	253	2.7e-25	(U37373) up-regulated by

				S14205		ATL8C26080:3353..2486						thyroid hormone in tadpoles; expressed specifically in the tail and only at metamorphosis; membrane bound or extracellular protein; C-terminal basic region [Xenopus laevis]
149493	ATU011433	ATL8C37156:1..1054	gap2	ATCEA4C5377_1, ATCEA4S32404, ATCEA4S1198	96, 90, 88	ATL8C37156:68..875	0.75	g4185141	40	600		(AC005724) putative calmodulin-binding protein

												[Arabidopsis thaliana]
149494	ATU011434	ATL8C29532:21..598	gap2	ATCEA4C4460_1	96	ATL8C29532:21..452	0.73	g2245087	40	162	3.5e-11	(Z97343) hypothetical protein [Arabidopsis thaliana]
149495	ATU011435	ATL8C46924:711..1	gap2	ATCEA4C51112_1, ATCEA4C51112_2	96, 85	ATL8C46924:476..343	0.73	g2160182	40	214	6.6e-22	(AC000132) ESTs gb|ATTS1236, gb|T43334, gb|N97019, gb|AA395203 come from this gene. [Arabidopsis thaliana]
149496	ATU011436	ATL8S5388:1..513	gap2	ATCEA4C35309_1, ATCEA4C149368_1	96, 96	ATL8S5388:80..271	0.65	g2392772	40	743	1.2e-68	(AC002534) putative chloroplast prephenate dehydratase [Arabidopsis thalia

												na]
149497	ATU011437	ATL8C17459:1473..238	gap2	ATCEA4C150464_1	96	ATL8C17459:1405..428	0.63	g4558553	40	463	1.9e-38	(AC007138) putative potassium channel [Arabidopsis thaliana]
149498	ATU011438	ATL8C49435:1315..1	gap2	ATCEA4S7372	96	ATL8C49435:1191..74	0.61	g2749943	40	67	1.3e-05	(U71244) pathogenesis-related group 5 protein [Brassica rapa]
149499	ATU011439	ATL8C9174:3251..1	gap2	ATCEA4S731, ATCEA4S31086, ATCEA4S27758	96, 95, 94	ATL8C9174:3251..7	0.55	g2088658	40	78		(AF002109) unknown protein [Arabidopsis thaliana]
149500	ATU011440	ATL8S28306:1..662	gap2	ATCEA4C7710_1	96	ATL8S28306:106..400	0.47	g3834326	40	609	8.2e-62	(AC005679) Similar to gb|AF067141 gamma-glutam

												yl hydrolase from Arabidopsis thaliana. ESTs gb|T46595 and gb|AI09918 come from this gene. [Arabidopsis thaliana]
149501	ATU011441	ATL8C43048:164..1251	gap2	ATCEA4S6718	96			g3212880	40	751	2.7e-68	(AC004005) putative Mlo protein [Arabidopsis thaliana]
149502	ATU011442	ATL8C4729:3014..1	gap2	ATCEA4C18141_1, ATCEA4S34122, ATCEA4C20642_1	96, 91, 90			g3004555	40	368	4.4e-36	(AC003673) similar to salt inducible protein [Arabidopsis thaliana]

149503	ATU011443	ATL8C3437:179..796	gap2	ATCEA4S29779	96	ATL8C3437:587..296	0.91	g4850398	39	793	4.6e-77	(AC007357) Strong similarity to []
149504	ATU011444	ATL8C36988:390..1703	gap2	ATCEA4C44034_1, ATCEA4S11690	96, 95	ATL8C36988:399..1693	0.91	g584998	39	352	1.3e-20	FLAVONOID 3',5'-HYDROXYLASE (F3'5'H) (CYTOCHROME P450 LXXVA2) (P-450EG1) [Solanum melongena]
149505	ATU011445	ATL8C30755:1964..1	gap2	ATCEA4C34169_1	96	ATL8C30755:1964..35	0.87	g927575	39	46	3.9e-07	(U12926) alpha galactosidase [Glycine max]
149506	ATU011446	ATL8C37626:1605..1	gap2	ATCEA4C99043_1, ATCEA4C22142_1	96, 95	ATL8C37626:1599..23	0.86	g4432844	39	282	8.9e-23	(AC006283) unknown protein [Arabidopsis thaliana]
149507	ATU011447	ATL8C46594:6	gap2	ATCEA4C17403	96, 84	ATL8C46594:1	0.85	g2253010	39	186	3.8e-09	(Y14199)

		68..3793		_1, ATCEA4C28520_1		043..2820						MAP3K delta-1 protein kinase [Arabidopsis thaliana]
149508	ATU011448	ATL8C26644:1..2123	gap2	ATCEA4S12047	96	ATL8C26644:564..2123	0.71	g1491615	39	643	1.4e-65	(X99923) male sterility 2-like protein [Arabidopsis thaliana]
149509	ATU011449	ATL8C47532:932..1	gap2	ATCEA4C6307_1, ATCEA4C2503_1, ATCEA4S30334, ATCEA4S5387	96, 95, 89, 88	ATL8C47532:864..174	0.68	g4587525	39	320	1.1e-29	(AC007060) Contains the PF|00650 CRAL/TRIO phosphatidyl-inositol-transfer protein domain. ESTs gb|T76582, gb|N06

												574 and gb|Z25700 come from this gene. [Arabidopsis thaliana]
149510	ATU011450	ATL8C723:639..1	gap2	ATCEA4C18196_1	96	ATL8C723:594..14	0.63	g3763917	39	220	4.4e-11	(AC004450) hypothetical protein [Arabidopsis thaliana]
149511	ATU011451	ATL8C24618:1543..956	gap2	ATCEA4C43628_1	96	ATL8C24618:1412..1213	0.59	g3004547	39	414	1.0e-40	(AC003673) unknown protein [Arabidopsis thaliana]
149512	ATU011452	ATL8C49385:800..1	gap2	ATCEA4S26636	96	ATL8C49385:593..132	0.56	g3402703	39	449	1.1e-49	(AC004261) hypothetical protein [Arabidopsis thaliana]
149513	ATU011453	ATL8C48713:1433..2	gap2	ATCEA4C34863_1,	96, 94	ATL8C48713:1513..2	0.55	g1652892	39	489	8.1e-35	(D90909) ABC transp

		571		ATCEA4S624		230						orter [Synechocystis sp.]
149514	ATU011454	ATL8C359:1..630	gap2	ATCEA4S35160	96	ATL8C359:167..471	0.51	g1653665	39	361	3.2e-33	(D90915) peptide chain release factor [Synechocystis sp.]
149515	ATU011455	ATL8C8599:1..1847	gap2	ATCEA4S30529	96	ATL8C8599:1802..1375	0.51	g2827663	39	312	5.3e-29	(AL021637) membrane-associated salt-inducible-like protein [Arabidopsis thaliana]
149516	ATU011456	ATL8C30831:1..947	gap2	ATCEA4C20235_1	96			g3451074	39	492	6.6e-53	(AL031326) putative protein [Arabidopsis thaliana]
149517	ATU011457	ATL8C25637:5	gap2	ATCEA4C9280	96			g4510402	39	289	4.6e-11	(AC006587)

		94..1731		1								putative AP2 domain [Arabidopsis thaliana]
149518	ATU011458	ATL8C33945:1698..3504	gap2	ATCEA4C70006_1, ATCEA4C12210_1, ATCEA4C24860_1	96, 85, 85			g3901294	39	824		(AF089711) rpp8 [Arabidopsis thaliana]
149519	ATU011459	ATL8S3936:424..1	gap2	ATCEA4C1520_1, ATCEA4S7512	96, 89			g2970034	39	553	8.4e-54	(D88536) delta 9 desaturase [Arabidopsis thaliana]
149520	ATU011460	ATL8S28877:355..520	gap2	ATCEA4S32618, ATCEA4C34166_2	96, 93			g2914701	39	127	8.0e-11	(AC003974) putative cytochrome b5 [Arabidopsis thaliana]
149521	ATU011461	ATL8S3434:683..1	gap2	ATCEA4S35830	96			g3004564	39	707	7.6e-50	(AC003673) putative receptor Ser/Thr

												protein kinase [Arabidopsis thaliana]
149522	ATU011462	ATL8C17466:135..1920	gap2	ATCEA4C15497_1	96	ATL8C17466:135..1716	0.97	g3024875	38	96	3.9e-09	HYPOTHETICAL 65.0 KD PROTEIN SLL0095 [Synechocystis sp.]
149523	ATU011463	ATL8C18662:1387..114	gap2	ATCEA4S23204, ATCEA4C138287_1	96, 90	ATL8C18662:1387..873	0.94	g4835756	38	618	1.3e-35	(AC007202) Is a member of the PF|00044 glyceraldehyde 3-phosphate dehydrogenase family. ESTs gb|T43985, gb|N38667, gb|N65037, gb|AA713069

												and gb|AI099548 come from this gene. [Arabidopsis thaliana]
149524	ATU011464	ATL8C36690:901..44	gap2	ATCEA4C24850_1, ATCEA4S26432	96, 84	ATL8C36690:895..104	0.86	g4835789	38	708	6.6e-66	(AC007296) Strong similarity to []
149525	ATU011465	ATL8C48499:301..1751	gap2	ATCEA4S17454	96	ATL8C48499:361..1669	0.82	g4544404	38	104	3.1e-11	(AC007047) unknown protein [Arabidopsis thaliana]
149526	ATU011466	ATL8C46215:1687..1	gap2	ATCEA4S5162, ATCEA4S12041	96, 92	ATL8C46215:1120..13	0.55	g2244898	38	1225	7.4e-125	(Z97338) strong similarity to protein phosphatase 2A regulatory chain, 74K [Arabidopsis thalia

												na]
149527	ATU011467	ATL8C46663:696..1	gap2	ATCEA4C399_1	96	ATL8C46663:665..165	0.47	g3218550	38	836	9.4e-86	(AB009399) Cdk-activating kinase 1At [Arabidopsis thaliana]
149528	ATU011468	ATL8S26176:1..570	gap2	ATCEA4C30025_1	96			g4455363	38	167	1.4e-17	(AL035524) Medicago nodulin N21-like protein [Arabidopsis thaliana]
149529	ATU011469	ATL8C32608:615..1	gap2	ATCEA4C18736_1, ATCEA4S10695, ATCEA4S32165	96, 95, 90			g2992164	38	491	3.6e-50	(AB012580) eIF3 p66 [Mus musculus]
149530	ATU011470	ATL8C674:939..1507	gap2	ATCEA4C35558_3, ATCEA4S16377	96, 92			g3150406	38	844	3.3e-76	(AC004165) putative indole-3-acetate beta-glucosyltransferas

												e [Arabidopsis thaliana]
149531	ATU011471	ATL8C36061:35..534	gap2	ATCEA4C20523_1, ATCEA4S31270	96, 95	ATL8C36061:96..490	0.99	g4886269	37	177	9.8e-16	(AL050300) putative ribosomal protein S14 [Arabidopsis thaliana]
149532	ATU011472	ATL8C30090:2551..1723	gap2	ATCEA4C80254_1, ATCEA4C25949_1	96, 96	ATL8C30090:2547..1976	0.99	g3953475	37	206	6.1e-10	(AC002328) F22O2.20 [Arabidopsis thaliana]
149533	ATU011473	ATL8C43077:992..1	gap2	ATCEA4S30457	96	ATL8C43077:947..193	0.88	g3021512	37	361	1.3e-17	(X96728) isocitrate dehydrogenase (NADP+) [Nicotiana tabacum]
149534	ATU011474	ATL8C5953:2364..1	gap2	ATCEA4S13021, ATCEA4S34973	96, 83	ATL8C5953:2117..146	0.87	g3152587	37	2111		(AC002986) Similar to CREB-binding

												protein homolog gb|U88570 from D. melanogaster and contains similarity to callus-associated protein gb|U01961 from Nicotiana tabacum. EST gb|W43427 comes from this gene. [Arabidopsis thaliana]
149535	ATU011475	ATL8C20291:1..1081	gap2	ATCEA4C17000_1	96	ATL8C20291:54..832	0.78	g4455192	37	621	8.2e-64	(AL035440) putative protei

												n [Arabidopsis thaliana]
149536	ATU011476	ATL8C44771:1..1604	gap2	ATCEA4S28038, ATCEA4C25086_1, ATCEA4S33573	96, 95, 90	ATL8C44771:214..1604	0.77	g2244868	37	950	1.8e-88	(Z97337) cytochrome P450 [Arabidopsis thaliana]
149537	ATU011477	ATL8C15860:1304..1	gap2	ATCEA4S13933	96	ATL8C15860:1304..269	0.60	g4584540	37	989	1.1e-81	(AL049608) putative protein [Arabidopsis thaliana]
149538	ATU011478	ATL8S9725:547..146	gap2	ATCEA4C116429_1	96	ATL8S9725:470..146	0.59	g2979555	37	167	3.0e-14	(AC003680) unknown protein [Arabidopsis thaliana]
149539	ATU011479	ATL8C20781:1330..3774	gap2	ATCEA4C6573_1, ATCEA4C66808_1	96, 90	ATL8C20781:1657..3707	0.53	g731857	37	181	4.4e-08	HYPOTHETICAL 103.6 KD PROTEIN IN COX5B-PFK26 INTERGENIC REGION

												[Saccharomyces cerevisiae]
149540	ATU011480	ATL8C26260:176..693	gap2	ATCEA4S6746	96			g2894604	37	205	9.0e-22	(AL021889) putative protein [Arabidopsis thaliana]
149541	ATU011481	ATL8C48834:1819..1	gap2	ATCEA4C9944_1	96			g3924611	37	898	2.9e-66	(AF069442) hypothetical protein [Arabidopsis thaliana]
149542	ATU011482	ATL8C29135:730..1582	gap2	ATCEA4S29939	96			g4680192	37	922	5.4e-95	(AF111710) hypothetical protein [Oryza sativa subsp. indica]
149543	ATU011483	ATL8C38968:768..1	gap2	ATCEA4S13113	96	ATL8C38968:710..376	0.91	g1171998	36	983	5.5e-97	PHENYLALANINE AMMONIA-LYASE [Camellia sinens

												is]
149544	ATU011484	ATL8C37447:207..1444	gap2	ATCEA4C6368_1, ATCEA4S32288	96, 88	ATL8C37447:207..1277	0.90	g418133	36	875		ANTHRANILATE SYNTHASE COMPONENT I-1 PRECURSOR [Arabidopsis thaliana]
149545	ATU011485	ATL8C38105:1..3796	gap2	ATCEA4S253	96	ATL8C38105:54..3694	0.82	g4063760, g4263544	36, 31	1112, 1631	4.7e-74, 5.2e-139	(AC005561) putative POL3 protein [Arabidopsis thaliana]; (AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
149546	ATU011486	ATL8S3450:1..700	gap2	ATCEA4C1325_1	96	ATL8S3450:9..623	0.76	g4587610	36	480	5.4e-54	(AC006951) putative indole-3-

												glycerol phosphate synthase precursor [Arabidopsis thaliana]
149547	ATU011487	ATL8C29795:1..1094	gap2	ATCEA4C101658_2, ATCEA4C101658_1	96, 87	ATL8C29795:267..712	0.61	g3021409	36	465	3.1e-26	(Y12781) transducin (beta) like 1 protein [Homo sapiens]
149548	ATU011488	ATL8C42385:1258..1	gap2	ATCEA4C25661_1, ATCEA4S34180	96, 92	ATL8C42385:708..292	0.59	g2980798	36	473	1.6e-18	(AL022197) putative protein [Arabidopsis thaliana]
149549	ATU011489	ATL8C47485:577..1	gap2	ATCEA4S30322, ATCEA4C6300_1	96, 86			g4432844	36	242	1.2e-18	(AC006283) unknown protein [Arabidopsis thaliana]
149550	ATU011490	ATL8C48778:2	gap2	ATCEA4S24105	96			g4455368	36	856	3.9e-80	(AL035524)

		793..3728										pectinesterase like protein [Arabidopsis thaliana]
149551	ATU011491	ATL8C13917:1..776	gap2	ATCEA4C46610_1, ATCEA4C46610_2	96, 93			g2194139	36	559	6.0e-35	(AC002062) EST gb|ATTS0887 comes from this gene. [Arabidopsis thaliana]
149552	ATU011492	ATL8S19792:1..455	gap2	ATCEA4C403_1	96			g3273200	36	281	1.6e-20	(AB010917) response reactor3 [Arabidopsis thaliana]
149553	ATU011493	ATL8C29786:1232..166	gap2	ATCEA4S32760	96	ATL8C29786:1134..411	0.95	g4732107	35	191	1.8e-07	(AF129082) COP9 complex homolog subunit 4 DCH4 [Drosophila

												melanogaster]
149554	ATU011494	ATL8C19238:2191..249	gap2	ATCEA4S904, ATCEA4C8964_1	96, 95	ATL8C19238:1862..249	0.90	g3915458	35	414	6.9e-33	PUTATIVE ABC TRANSPORTER C8C9.18 IN CHROMOSOME I []
149555	ATU011495	ATL8C8675:1..1449	gap2	ATCEA4C62666_1, ATCEA4S30543, ATCEA4S33732	96, 91, 86	ATL8C8675:520..1046	0.89	g3738306	35	938	9.7e-80	(AC005309) unknown protein [Arabidopsis thaliana]
149556	ATU011496	ATL8C35409:1..3901	gap2	ATCEA4S14800	96	ATL8C35409:177..3901	0.84	g2809246	35	539	2.1e-38	(AC002560) F24O1.15 [Arabidopsis thaliana]
149557	ATU011497	ATL8C38034:1333..54	gap2	ATCEA4C7797_1	96	ATL8C38034:1333..54	0.83	g4322670	35	80	9.3e-05	(AF094508) dentin phosphoryn [Homo sapiens]
149558	ATU011498	ATL8C1385:2690..1	gap2	ATCEA4S30628, ATCEA4S30643	96, 91	ATL8C1385:2195..1496	0.75	g4914343	35	141	1.8e-07	(AC005489) F14N23.29 [Arabidopsis

												thaliana]
149559	ATU011499	ATL8C27600:1..369	gap2	ATCEA4S3037	96	ATL8C27600:191..78	0.74	g2832695	35	521		(AL021713) putative protein [Arabidopsis thaliana]
149560	ATU011500	ATL8C49263:1..1554	gap2	ATCEA4C6729_1, ATCEA4S36116, ATCEA4S35410, ATCEA4S20275	96, 94, 93, 92	ATL8C49263:378..974	0.71	g3176687	35	786	9.1e-74	(AC003671) Strong similarity to trehalose-6-phosphate synthase homolog from A. thaliana chromosome 4 contig gb|Z97344. ESTs gb|H37594, gb|R65023, gb|H37578 and gb|R64855 come

												from this gene. [Arabidopsis thaliana]
149561	ATU011501	ATL8C48802:1..1623	gap2	ATCEA4S36322, ATCEA4C593_1	96, 96	ATL8C48802:18..1623	0.52	g784946	35	578	1.1e-40	(Z31402) cyclin 3b [Arabidopsis thaliana]
149562	ATU011502	ATL8C14357:1011..4157	gap2	ATCEA4C71445_1, ATCEA4C130789_1	96, 96	ATL8C14357:1011..4101	0.49	g1841357	35	217	1.5e-18	(D85382) mitochondrial ribosomal protein S11 (nuclear encoded) [Oryza sativa]
149563	ATU011503	ATL8S21276:1..560	gap2	ATCEA4C504_1	96	ATL8S21276:50..111	0.46	g2959320	35	219	2.6e-24	(Z97057) ANR1, MADS-box protein [Arabidopsis thaliana]
149564	ATU011504	ATL8C50146:1..659	gap2	ATCEA4S4786	96			g3128170	35	898	1.7e-85	(AC004521) hypoth

												etical protein [Arabidopsis thaliana]
149565	ATU011505	ATL8C4178:1108..1742	gap2	ATCEA4C110525_1	96			g3334144	35	204	1.0e-18	G1/S-SPECIFIC CYCLIN C-TYPE [Oryza sativa]
149566	ATU011506	ATL8C34999:1863..1	gap2	ATCEA4S32321, ATCEA4C119122_1, ATCEA4S30447, ATCEA4C14236_1	96, 95, 92, 85	ATL8C34999:1566..772	0.96	g3046695	34	335	1.2e-23	(AL022224) putative protein [Arabidopsis thaliana]
149567	ATU011507	ATL8C17692:664..1	gap2	ATCEA4C118573_1	96	ATL8C17692:664..63	0.90	g629669	34	201	6.7e-17	hypothetical protein - tomato []
149568	ATU011508	ATL8S12879:513..1	gap2	ATCEA4S35571, ATCEA4C116057_1	96, 96	ATL8S12879:470..30	0.87	g4038055	34	365	1.7e-31	(AC005897) putative cytochrome P450 [Arabidopsis thaliana]

149569	ATU011509	ATL8S6031:1..508	gap2	ATCEA4S4610	96	ATL8S6031:112..451	0.86	g3600030	34	548	1.1e-54	(AF080119) contains similarity to ankyrin repeats (Pfam: ank.hmm, score: 13.93, 14.93 and 27.78) [Arabidopsis thaliana]
149570	ATU011510	ATL8C38467:34..650	gap2	ATCEA4C518_1, ATCEA4S5743	96, 94	ATL8C38467:48..421	0.70	g2160191	34	525	1.5e-50	(AC000132) Identical to A. thaliana AtK-1 (gb|X79279). [Arabidopsis thaliana]
149571	ATU011511	ATL8C44093:1..1813	gap2	ATCEA4S19336, ATCEA4C90868_1, ATCEA4S25843	96, 95, 93, 83	ATL8C44093:208..863	0.61	g2980851	34	97	1.5e-08	(Y07908) serine/threonine protein kinase

				, ATCEA4 S25040								[Drosophila melanogaster]
149572	ATU011512	ATL8S2693:532..1	gap2	ATCEA4C1328_1	96			g2119046	34	378	9.7e-36	small nuclear ribonucleoprotein U1A - Arabidopsis thaliana [Arabidopsis thaliana]
149573	ATU011513	ATL8C23703:2258..1250	gap2	ATCEA4C58723_1, ATCEA4S29748	96, 84			g2131483	34	97	0.041	hypothetical protein YDR427w - yeast (Saccharomyces cerevisiae) [Saccharomyces cerevisiae]
149574	ATU011514	ATL8C48457:2481..1	gap2	ATCEA4S2054, ATCEA4S7930	96, 95			g4335722	34	203	3.3e-18	(AC006248) hypothetical protein [Arabidopsis

												thaliana]
149575	ATU011515	ATL8C28975:961..1	gap2	ATCEA4C129266_1	96	ATL8C28975:780..36	0.98	g4586117	33	430	5.7e-30	(AL049638) putative protein [Arabidopsis thaliana]
149576	ATU011516	ATL8S20553:378..1	gap2	ATCEA4S5339, ATCEA4S1495, ATCEA4S23390	96, 89, 87	ATL8S20553:182..11	0.96	g4314378	33	326	2.1e-31	(AC006232) putative lipase [Arabidopsis thaliana]
149577	ATU011517	ATL8C9530:208..1295	gap2	ATCEA4C39165_1, ATCEA4S8067	96, 87	ATL8C9530:216..825	0.96	g4309889	33	72	0.27	(AC004983) similar to PID:g3877944 [Homo sapiens]
149578	ATU011518	ATL8C45336:292..1377	gap2	ATCEA4C14633_1	96	ATL8C45336:817..1311	0.95	g2244913	33	630	8.2e-53	(Z97339) similar to SEN1 protein - yeast [Arabidopsis thaliana]
149579	ATU011519	ATL8C21941:1	gap2	ATCEA4C54470	96	ATL8C21941:1	0.94	g4732123	33	98	3.5e-06	(AF129087)

		94..879		_1		99..879						mitogen-activated protein kinase homologue [Medicago sativa]
149580	ATU011520	ATL8C375:1451..3083	gap2	ATCEA4C12064_1	96	ATL8C375:1506..2945	0.94	g1498315	33	711	1.7e-46	(U56419) IAP100 [Pisum sativum]
149581	ATU011521	ATL8C32857:1195..238	gap2	ATCEA4C6062_1, ATCEA4C6062_2	96, 93	ATL8C32857:1091..242	0.89	g3582436	33	719	2.1e-57	(AB017502) beta-D-glucan exohydrolase [Nicotiana tabacum]
149582	ATU011522	ATL8C62:86..1070	gap2	ATCEA4C35806_1	96	ATL8C62:86..1007	0.80	g3157945	33	928	8.7e-97	(AC002131) Contains similarity to axi 1 gene gb|X80301 from Nicotiana tabacum.

												[Arabidopsis thaliana]
149583	ATU011523	ATL8C5442:1..3963	gap2	ATCEA4S2175	96	ATL8C5442:530..3963	0.74	g3426046	33	204	3.0e-18	(AC005168) similar to salt-inducible protein [Arabidopsis thaliana]
149584	ATU011524	ATL8S8325:594..1	gap2	ATCEA4C28327_1	96	ATL8S8325:594..112	0.73	g3413717	33	190	3.7e-20	(AC004747) unknown protein [Arabidopsis thaliana]
149585	ATU011525	ATL8C41204:745..1	gap2	ATCEA4C80247_1	96	ATL8C41204:548..57	0.73	g2262100	33	513	4.5e-53	(AC002343) unknown protein [Arabidopsis thaliana]
149586	ATU011526	ATL8C41109:546..1	gap2	ATCEA4C32628_1	96	ATL8C41109:396..36	0.71	g2832643	33	404	8.8e-24	(AL021710) hypothetical protein [Arabidopsis

												thaliana]
149587	ATU011527	ATL8C27408:1..866	gap2	ATCEA4S3624	96			g4559396	33	693		(AC006526) unknown protein [Arabidopsis thaliana]
149588	ATU011528	ATL8S5498:366..114	gap2	ATCEA4C28443_1	96			g4220526	33	98	0.0098	(AL035356) Bnm1 like protein [Arabidopsis thaliana]
149589	ATU011529	ATL8C35589:1..1198	gap2	ATCEA4S30400	96			g2129782	33	609	8.9e-58	NADH-ubiquinone oxidoreductase chain II - Arabidopsis thaliana mitochondrion [Arabidopsis thaliana]
149590	ATU011530	ATL8C32134:1225..505	gap2	ATCEA4C23116_1	96			g3540196	33	774	5.5e-73	(AC004260) Putative

												amp-binding protein [Arabidopsis thaliana]
149591	ATU011531	ATL8S22457:1..481	gap2	ATCEA4C3619_1	96			g4510383	33	538	2.7e-52	(AC007017) unknown protein [Arabidopsis thaliana]
149592	ATU011532	ATL8C34040:1..1225	gap2	ATCEA4C46403_1	96	ATL8C34040:24..1150	0.95	g2145358	32	1079	7.6e-118	(Y10922) HD-Zip protein [Arabidopsis thaliana]
149593	ATU011533	ATL8C26379:685..1	gap2	ATCEA4C65821_2, ATCEA4C65821_1	96, 90	ATL8C26379:242..311	0.85	g3831463	32	360	2.2e-37	(AC005700) unknown protein [Arabidopsis thaliana]
149594	ATU011534	ATL8C34204:695..1	gap2	ATCEA4S4559, ATCEA4S461	96, 86	ATL8C34204:564..143	0.85	g3980378	32	665	1.9e-64	(AC004561) putative RNA binding protei

												n [Arabidopsis thaliana]
149595	ATU011535	ATL8C2902:1..659	gap2	ATCEA4C14632_1	96	ATL8C2902:82..578	0.66	g2654118	32	250	1.7e-29	(AF034579) copper amine oxidase [Arabidopsis thaliana]
149596	ATU011536	ATL8C11484:81..582	gap2	ATCEA4C17751_1	96			g2262159	32	342	1.5e-33	(AC002329) predicted protein similar to S.pombe protein C5H10.03 [Arabidopsis thaliana]
149597	ATU011537	ATL8C19877:739..1	gap2	ATCEA4C6982_1	96			g109313	32	131	1.2e-10	dimethylaniline monooxygenase (N-oxide-forming) (EC 1.14.13.8), hepati

												c 2 - rabbit [rabbits, liver, Peptide, 533 aa]
149598	ATU011538	ATL8C36472:1456..1	gap2	ATCEA4C991_1, ATCEA4C991_3, ATCEA4C990_1, ATCEA4S30827, ATCEA4S7013	96, 90, 88, 88, 87			g1346388	32	437	3.4e-28	KNOTTED-LIKE HOMEOBOX PROTEIN 4 [Arabidopsis thaliana]
149599	ATU011539	ATL8C33310:1659..1	gap2	ATCEA4S31402, ATCEA4S27049	96, 87			g282748	32	308	1.1e-32	gene coxII intron 2 protein - liverwort (Marchantia polymorpha) mitochondrion [Marchantia polymorpha]
149600	ATU011540	ATL8S15042:1..432	gap2	ATCEA4S2004, ATCEA4C5534	96, 93			g4263704	32	166	7.2e-17	(AC006223) putative

				1								sugar starvation-induced protein [Arabidopsis thaliana]
149601	ATU011541	ATL8C44826:1..1105	gap2	ATCEA4C70396_1, ATCEA4C2992_1, ATCEA4C2992_2	96, 96, 95			g2246532	32	153	6.4e-12	(U93872) ORF 73, contains large complex repeat CR 73 [Kaposi's sarcoma-associated herpesvirus]
149602	ATU011542	ATL8C28160:503..828	gap2	ATCEA4C11369_1	96			g4895218	32	97	0.00010	(AC007660) hypothetical protein [Arabidopsis thaliana]
149603	ATU011543	ATL8S5487:296..123	gap2	ATCEA4C596_1	96			g2065013	32	199	1.7e-18	(Y11650) cyclic phosphodiesterase

												[Arabidopsis thaliana]
149604	ATU011544	ATL8C11006:667..1	gap2	ATCEA4C20612_1	96			g3420050	32	588	1.3e-54	(AC004680) hypothetical protein [Arabidopsis thaliana]
149605	ATU011545	ATL8C26703:4035..567	gap2	ATCEA4C26322_1	96	ATL8C26703:3884..567	0.87	g3880922	31	196	1.3e-17	(Z99271) similar to zinc metallopeptidase (M8 family); cDNA EST EMBL:C07771 comes from this gene; cDNA EST EMBL:C09261 comes from this gene; cDNA EST yk259c1.5

												comes from this gene [Caenorhabditis elegans]
149606	ATU011546	ATL8C27193:698..1	gap2	ATCEA4C160711_1	96	ATL8C27193:531..21	0.82	g4835776	31	434	1.7e-31	(AC007296) Similar to []
149607	ATU011547	ATL8C10202:647..1	gap2	ATCEA4C26069_1	96	ATL8C10202:447..30	0.71	g4099090	31	583		(U83178) unknown [Arabidopsis thaliana]
149608	ATU011548	ATL8C42914:4061..2076	gap2	ATCEA4S36348	96	ATL8C42914:4016..2137	0.71	g2865422	31	866	8.4e-69	(AF039370) chromomethylase [Arabidopsis thaliana]
149609	ATU011549	ATL8C20260:1..1172	gap2	ATCEA4S479	96	ATL8C20260:382..1022	0.68	g2244899	31	759	2.6e-51	(Z97338) similar to UFD1 protein [Arabidopsis thaliana]
149610	ATU011550	ATL8C24417:5	gap2	ATCEA4C2407	96, 92	ATL8C24417:5	0.66	g2864618	31	117	0.00014	(AL021811)

		377..560		2, ATCEA4C2407_1		377..720						putative protein [Arabidopsis thaliana]
149611	ATU011551	ATL8C37508:1905..150	gap2	ATCEA4S12722	96	ATL8C37508:1905..306	0.64	g4539359	31	168		(AL049525) putative protein [Arabidopsis thaliana]
149612	ATU011552	ATL8C47540:658..385	gap2	ATCEA4C15103_2, ATCEA4S33571, ATCEA4S34093, ATCEA4S31189	96, 87, 86, 86			g3834310	31	124	1.6e-10	(AC005679) Similar to Ubiquitin-conjugating enzyme E2-17 KD gb|D83004 from Homo sapiens. ESTs gb|T88233, gb|Z24464, gb|N37265, gb|H36151, gb|Z34

												711, gb|AA040983, and gb|T22122 come from this gene. [Arabidopsis thaliana]
149613	ATU011553	ATL8C48079:1..619	gap2	ATCEA4C84387_1	96			g4522012	31	327	2.0e-25	(AC007069) hypothetical protein [Arabidopsis thaliana]
149614	ATU011554	ATL8C34782:1..805	gap2	ATCEA4S35292	96			g4204313	31	840	2.6e-74	(AC003027) lcl|prt_seq No definition line found [Arabidopsis thaliana]
149615	ATU011555	ATL8S11982:575..1	gap2	ATCEA4S26770	96			g3874563	31	154	4.9e-12	(Z81042) similar to Yeast hypothetical protei

												n YEY6 like; cDNA EST yk206h 5.3 comes from this gene; cDNA EST yk206h 5.5 comes from this gene; cDNA EST yk303h 1.3 comes from this gene; cDNA EST yk303h 1.5 comes from this gene; cDNA ... []
149616	ATU011556	ATL8C40815:1..649	gap2	ATCEA4C504_1	96	ATL8C40815:38..649	0.97	g4586018	30	276	7.7e-27	(AC007210) putative MADS-box protein ANR1

												[Arabidopsis thaliana]
149617	ATU011557	ATL8C42432:1..2081	gap2	ATCEA4S20410, ATCEA4C1808_1, ATCEA4C1808_2	96, 95, 88	ATL8C42432:105..1134	0.92	g2281085	30	233	8.5e-19	(AC002333) CTR1 protein kinase isolog [Arabidopsis thaliana]
149618	ATU011558	ATL8C36865:1..1840	gap2	ATCEA4C706_1	96	ATL8C36865:77..1575	0.88	g4185855	30	1182	4.7e-105	(AJ132388) Ca2+-ATPase [Arabidopsis thaliana]
149619	ATU011559	ATL8C37061:1..1133	gap2	ATCEA4C869_1	96	ATL8C37061:397..1101	0.87	g547867	30	1078		LIPOXYGENASE 1 [Arabidopsis thaliana]
149620	ATU011560	ATL8C13233:1502..1	gap2	ATCEA4S1804	96	ATL8C13233:1493..113	0.84	g3746071	30	685	2.8e-49	(AC005311) putative GTP-binding protein [Arabidopsis thaliana]
149621	ATU011	ATL8C1	gap2	ATCEA4	96	ATL8C1	0.83	g37765	30	453	3.4e-	(AC005

	561	5116:1..1299		C18613_1		5116:51..976		59			41	388) Strong similarity to gene F14J9.26 [Arabidopsis thaliana]
149622	ATU011562	ATL8C4236:866..97	gap2	ATCEA4C51888_1, ATCEA4S35431	96, 85	ATL8C4236:658..106	0.75	g4220523	30	272	4.1e-30	(AL035356) putative alliinlyase [Arabidopsis thaliana]
149623	ATU011563	ATL8C30749:519..1064	gap2	ATCEA4C9742_1, ATCEA4S8715	96, 85	ATL8C30749:606..938	0.71	g4455152	30	519	8.4e-53	(AL022140) putative protein (fragment) [Arabidopsis thaliana]
149624	ATU011564	ATL8C3789:621..126	gap2	ATCEA4S7442	96	ATL8C3789:533..126	0.59	g3894193	30	162	5.8e-16	(AC005662) putative strictosidine synthase [Arabidopsis

												thaliana]
149625	ATU011565	ATL8S5413:4933..1	gap2	ATCEA4C40471_1	96	ATL8S5413:3455..14	0.57	g4220523	30	543	7.5e-55	(AL035356) putative alliin lyase [Arabidopsis thaliana]
149626	ATU011566	ATL8C3593:1..1102	gap2	ATCEA4C1871_1	96	ATL8C3593:756..857	0.45	g4469408	30	151	4.8e-06	(AF116527) MADS box protein FLOWERING LOCUS F [Arabidopsis thaliana]
149627	ATU011567	ATL8S30182:1..527	gap2	ATCEA4C6987_1	96			g4538978	30	161	0.00035	(AL049487) hypothetical protein [Arabidopsis thaliana]
149628	ATU011568	ATL8C40559:1116..8	gap2	ATCEA4S26802	96			g3193326	30	127	0.32	(AF069299) contains similarity to transcriptio

												nal activators such as Ra-like and myc-like regulatory R proteins [Arabidopsis thaliana]
149629	ATU011569	ATL8S23851:415..1	gap2	ATCEA4C1696_1	96			g2952433	30	215	1.2e-20	(AF051135) putative ubiquitin activating enzyme E1 [Arabidopsis thaliana]
149630	ATU011570	ATL8S127:38..226	gap2	ATCEA4C4776_1	96	ATL8S127:38..226	1.00					
149631	ATU011571	ATL8C36897:2307..880	gap2	ATCEA4C5748_1, ATCEA4C76539_1	96, 92	ATL8C36897:2214..1063	1.00					
149632	ATU011572	ATL8C18412:543..1	gap2	ATCEA4C675_1	96	ATL8C18412:374..239	1.00					

149633	ATU011573	ATL8C38393:1..1358	gap2	ATCEA4C469_1	96	ATL8C38393:131..1118	1.00					
149634	ATU011574	ATL8S1886:1..378	gap2	ATCEA4C17241_1	96	ATL8S1886:21..378	1.00					
149635	ATU011575	ATL8C46247:805..250	gap2	ATCEA4C35142_1	96	ATL8C46247:805..459	1.00					
149636	ATU011576	ATL8C12628:2389..1734	gap2	ATCEA4C93552_1	96	ATL8C12628:2389..1815	1.00					
149637	ATU011577	ATL8C49501:1446..855	gap2	ATCEA4C29257_1	96	ATL8C49501:1380..873	1.00					
149638	ATU011578	ATL8C36315:1046..1460	gap2	ATCEA4C22681_1, ATCEA4S26847, ATCEA4S30385	96, 95, 90	ATL8C36315:1380..1268	1.00					
149639	ATU011579	ATL8C511:20..872	gap2	ATCEA4C2065_1	95	ATL8C511:143..690	1.00	g1755192	100	925	1.8e-88	(U75207) germin-like protein [Arabidopsis thaliana]
149640	ATU011580	ATL8C33768:131..620	gap2	ATCEA4S8231, ATCEA4C20296_1	96, 83	ATL8C33768:354..620	0.99					
149641	ATU011581	ATL8C1077:82	gap2	ATCEA4C12299	96	ATL8C1077:82	0.99					

		5..1		2_1		5..115						
149642	ATU011582	ATL8S20341:138..474	gap2	ATCEA4S5547	96	ATL8S20341:138..467	0.99					
149643	ATU011583	ATL8C35971:30..1172	gap2	ATCEA4S25969, ATCEA4S5908	96, 89	ATL8C35971:61..1131	0.99					
149644	ATU011584	ATL8C10526:160..515	gap2	ATCEA4S3458	96	ATL8C10526:160..246	0.99					
149645	ATU011585	ATL8C24960:270..480	gap2	ATCEA4C14056_2	96	ATL8C24960:294..371	0.99					
149646	ATU011586	ATL8C36514:1831..892	gap2	ATCEA4C47919_3, ATCEA4C47919_1, ATCEA4S32499	96, 94, 92	ATL8C36514:1830..1094	0.99					
149647	ATU011587	ATL8C378:80..1194	gap2	ATCEA4C137217_1	96	ATL8C378:114..1194	0.99					
149648	ATU011588	ATL8S28027:539..242	gap2	ATCEA4S32141	96	ATL8S28027:350..242	0.99					
149649	ATU011589	ATL8C6310:515..1	gap2	ATCEA4S5310	96	ATL8C6310:421..178	0.98					
149650	ATU011590	ATL8C523:1036..1853	gap2	ATCEA4C13159_1, ATCEA4S5245	96, 89	ATL8C523:1163..1853	0.98					
149651	ATU011591	ATL8C23198:1..253	gap2	ATCEA4S12540	96	ATL8C23198:135..25	0.98					

						3						
149652	ATU011592	ATL8C24760:1653..1	gap2	ATCEA4C46764_1, ATCEA4C119771_1, ATCEA4C20598_1, ATCEA4S18483	96, 91, 85, 85	ATL8C24760:1411..226	0.98					
149653	ATU011593	ATL8C16472:2163..47	gap2	ATCEA4C20486_1	96	ATL8C16472:1248..47	0.98					
149654	ATU011594	ATL8C17953:1..947	gap2	ATCEA4C47463_1, ATCEA4C5303_1, ATCEA4S6647	96, 91, 89	ATL8C17953:48..943	0.98					
149655	ATU011595	ATL8C41069:1357..17	gap2	ATCEA4S26358	96	ATL8C41069:1329..17	0.98					
149656	ATU011596	ATL8C22272:1927..115	gap2	ATCEA4C100661_1	96	ATL8C22272:1927..463	0.98					
149657	ATU011597	ATL8C10083:3232..625	gap2	ATCEA4C60532_1, ATCEA4C16929_1	96, 94	ATL8C10083:3189..714	0.98					
149658	ATU011598	ATL8C6519:1050..1	gap2	ATCEA4C314_1	96	ATL8C6519:929..190	0.98					
149659	ATU011599	ATL8S1854:42..587	gap2	ATCEA4S2114	96	ATL8S1854:42..576	0.98					

149660	ATU011600	ATL8S15777:357..54	gap2	ATCEA4C74927_1	96	ATL8S15777:307..212	0.98					
149661	ATU011601	ATL8C26809:601..1	gap2	ATCEA4C381_1	96	ATL8C26809:76..10	0.98					
149662	ATU011602	ATL8C45559:220..835	gap2	ATCEA4S1628	96	ATL8C45559:226..357	0.98					
149663	ATU011603	ATL8C39460:1..776	gap2	ATCEA4C7956_1, ATCEA4S30893	96, 94	ATL8C39460:153..770	0.97					
149664	ATU011604	ATL8C48859:733..2307	gap2	ATCEA4S7847, ATCEA4C26556_1	96, 96	ATL8C48859:1643..2307	0.97					
149665	ATU011605	ATL8S7214:70..490	gap2	ATCEA4C419_1, ATCEA4S17528, ATCEA4S13552	96, 91, 84	ATL8S7214:70..204	0.97					
149666	ATU011606	ATL8C30253:375..1	gap2	ATCEA4C726_1	96	ATL8C30253:204..110	0.97					
149667	ATU011607	ATL8C36101:703..1292	gap2	ATCEA4C34782_1	96	ATL8C36101:826..1292	0.97					
149668	ATU011608	ATL8S12142:48..458	gap2	ATCEA4C65236_1	96	ATL8S12142:48..458	0.97					
149669	ATU011609	ATL8C38017:138..1650	gap2	ATCEA4C47196_1	96	ATL8C38017:138..1559	0.97					

149670	ATU011610	ATL8C1575:4065..5674	gap2	ATCEA4S30349	96	ATL8C1575:4065..5674	0.97					
149671	ATU011611	ATL8C38834:1155..275	gap2	ATCEA4C21293_1, ATCEA4C143277_1	96, 92	ATL8C38834:1093..663	0.97					
149672	ATU011612	ATL8C27942:328..815	gap2	ATCEA4S29285, ATCEA4C89794_2	96, 94	ATL8C27942:621..552	0.97					
149673	ATU011613	ATL8S29561:1..277	gap2	ATCEA4S27212	96	ATL8S29561:165..277	0.96					
149674	ATU011614	ATL8C24962:398..1617	gap2	ATCEA4C46115_1, ATCEA4C3058_1, ATCEA4S6446	96, 93, 90	ATL8C24962:511..1423	0.96					
149675	ATU011615	ATL8C26061:867..265	gap2	ATCEA4C18763_1	96	ATL8C26061:604..265	0.96					
149676	ATU011616	ATL8C37449:3130..170	gap2	ATCEA4S6435	96	ATL8C37449:3130..170	0.96					
149677	ATU011617	ATL8C16137:708..50	gap2	ATCEA4S13225	96	ATL8C16137:708..146	0.96					
149678	ATU011618	ATL8C40760:675..227	gap2	ATCEA4S10835	96	ATL8C40760:351..227	0.96					

149679	ATU011619	ATL8C43718:3593..5136	gap2	ATCEA4C15718_1	96	ATL8C43718:3669..5136	0.96					
149680	ATU011620	ATL8C37685:1429..300	gap2	ATCEA4C18742_2, ATCEA4C18742_1	96, 85	ATL8C37685:1381..456	0.96					
149681	ATU011621	ATL8S1659:383..1	gap2	ATCEA4C4619_1	96	ATL8S1659:76..11	0.96					
149682	ATU011622	ATL8C607:1..478	gap2	ATCEA4C62590_1	96	ATL8C607:34..315	0.96					
149683	ATU011623	ATL8C31426:5740..1663	gap2	ATCEA4S4759, ATCEA4S4309	96, 89	ATL8C31426:2630..5740	0.96					
149684	ATU011624	ATL8C8558:357..3245	gap2	ATCEA4C17590_1, ATCEA4S13388	95, 95	ATL8C8558:776..3128	0.96	g2887499, g2191150	100, 100	132, 229	1.1e-10, 6.1e-19	(AC004143) R29893_1 [Homo sapiens]; (AF007269) similar to mitochondrial carrier family [Arabidopsis thaliana]
149685	ATU011625	ATL8C48750:2604..9	gap2	ATCEA4S6045	96	ATL8C48750:2580..9	0.95					

		2				2						
149686	ATU011626	ATL8C17180:2203..527	gap2	ATCEA4C5410_1	96	ATL8C17180:2203..527	0.95					
149687	ATU011627	ATL8C23725:482..1	gap2	ATCEA4C43636_1	96	ATL8C23725:475..10	0.95					
149688	ATU011628	ATL8C31974:82..343	gap2	ATCEA4C12153_1	96	ATL8C31974:82..215	0.95					
149689	ATU011629	ATL8C10691:739..12	gap2	ATCEA4C33365_1	96	ATL8C10691:732..12	0.95					
149690	ATU011630	ATL8S30399:747..38	gap2	ATCEA4S7519	96	ATL8S30399:635..38	0.95					
149691	ATU011631	ATL8C27279:280..9355	gap2	ATCEA4C38502_1, ATCEA4S6745	96, 94	ATL8C27279:280..9355	0.95					
149692	ATU011632	ATL8C26680:1755..2639	gap2	ATCEA4C989_1, ATCEA4S28632	96, 85	ATL8C26680:1767..2349	0.95					
149693	ATU011633	ATL8C13136:168..2312	gap2	ATCEA4C39460_1	96	ATL8C13136:168..2312	0.95					
149694	ATU011634	ATL8C11649:1..1234	gap2	ATCEA4C25292_1, ATCEA4S29542	96, 93	ATL8C11649:64..886	0.95					
149695	ATU011635	ATL8C47709:662..1366	gap2	ATCEA4C19626_1	96	ATL8C47709:662..1358	0.95					
149696	ATU011636	ATL8C14062:1009..343	gap2	ATCEA4C122931_3, ATCEA4	96, 94, 85	ATL8C14062:1009..587	0.95					

				S32439, ATCEA4C122931_1								
149697	ATU011637	ATL8C15130:6..944	gap2	ATCEA4C129068_1, ATCEA4S34008, ATCEA4S32938	96, 92, 90	ATL8C15130:6..312	0.95					
149698	ATU011638	ATL8C49030:132..1150	gap2	ATCEA4C24676_1	96	ATL8C49030:137..1150	0.95					
149699	ATU011639	ATL8C17294:3841..7037	gap2	ATCEA4C606431_1, ATCEA4C138035_1	96, 89	ATL8C17294:3841..7037	0.95					
149700	ATU011640	ATL8C17528:1..345	gap2	ATCEA4C5795_1	96	ATL8C17528:154..345	0.95					
149701	ATU011641	ATL8C27659:555..79	gap2	ATCEA4C2996_1	96	ATL8C27659:500..255	0.95					
149702	ATU011642	ATL8C39343:1603..3202	gap2	ATCEA4C115843_1	96	ATL8C39343:1603..3191	0.95					
149703	ATU011643	ATL8C27484:1153..109	gap2	ATCEA4S14583, ATCEA4S10901	96, 87	ATL8C27484:1082..622	0.94					
149704	ATU011644	ATL8C17659:253..1068	gap2	ATCEA4C8791_1, ATCEA4	96, 90	ATL8C17659:288..602	0.94					

				C14461_1								
149705	ATU011645	ATL8C27935:1..2647	gap2	ATCEA4C136066_1, ATCEA4S21603, ATCEA4C19408_1	95, 88, 85	ATL8C27935:314..2647	0.94	g1168530	100	1386		SERINE/THREONINE-PROTEIN KINASE ASK2 [Arabidopsis thaliana]
149706	ATU011646	ATL8S625:343..1	gap2	ATCEA4S27220	96	ATL8S625:343..34	0.94					
149707	ATU011647	ATL8C4212:393..2523	gap2	ATCEA4C14523_1, ATCEA4C18011_1	96, 96	ATL8C4212:438..2471	0.94					
149708	ATU011648	ATL8C13974:2537..63	gap2	ATCEA4C177_1, ATCEA4S27860, ATCEA4S27537	96, 89, 89	ATL8C13974:2537..380	0.94					
149709	ATU011649	ATL8C28659:70..718	gap2	ATCEA4C87903_1, ATCEA4C87903_2	96, 90	ATL8C28659:70..711	0.94					
149710	ATU011650	ATL8C41877:201..1696	gap2	ATCEA4C34034_1	96	ATL8C41877:1696..201	0.94					
149711	ATU011651	ATL8C5261:3663..4719	gap2	ATCEA4S861	96	ATL8C5261:3903..4719	0.94					

149712	ATU011652	ATL8C21650:94..2226	gap2	ATCEA4C1120_1, ATCEA4S34166	96, 86	ATL8C21650:369..1960	0.94					
149713	ATU011653	ATL8C35931:134..418	gap2	ATCEA4C24554_1	96	ATL8C35931:374..144	0.94					
149714	ATU011654	ATL8C33234:996..1	gap2	ATCEA4C20193_1, ATCEA4S973	96, 94	ATL8C33234:996..85	0.94					
149715	ATU011655	ATL8C36076:1731..442	gap2	ATCEA4C125943_1	96	ATL8C36076:1731..616	0.94					
149716	ATU011656	ATL8C20200:1284..372	gap2	ATCEA4C13454_1	96	ATL8C20200:877..372	0.94					
149717	ATU011657	ATL8C14883:1069..1	gap2	ATCEA4C1957_1	96	ATL8C14883:1054..327	0.94					
149718	ATU011658	ATL8C19124:205..1	gap2	ATCEA4S2857	96	ATL8C19124:205..33	0.94					
149719	ATU011659	ATL8C36123:561..3065	gap2	ATCEA4C30215_1, ATCEA4S1631	96, 94	ATL8C36123:1017..3065	0.94					
149720	ATU011660	ATL8C31402:3635..1939	gap2	ATCEA4S2382, ATCEA4S35474	96, 90	ATL8C31402:3635..1939	0.94					
149721	ATU011661	ATL8C40262:549..1	gap2	ATCEA4C7059_1	96	ATL8C40262:360..247	0.94					
149722	ATU011662	ATL8C39795:2	gap2	ATCEA4S33517	96	ATL8C39795:4	0.93					

		00..839				21..746						
149723	ATU011663	ATL8C47402:17..521	gap2	ATCEA4S771	96	ATL8C47402:47..127	0.93					
149724	ATU011664	ATL8C6524:1..1050	gap2	ATCEA4C44792_2, ATCEA4C16101_1	96, 95	ATL8C6524:126..1033	0.93					
149725	ATU011665	ATL8C39621:71..643	gap2	ATCEA4C611_1	96	ATL8C39621:84..340	0.93					
149726	ATU011666	ATL8C38891:230..475	gap2	ATCEA4C75193_1	96	ATL8C38891:423..245	0.93					
149727	ATU011667	ATL8C17368:2510..1376	gap2	ATCEA4C4750_1	96	ATL8C17368:2402..1652	0.93					
149728	ATU011668	ATL8C2065:323..1710	gap2	ATCEA4S2106	96	ATL8C2065:323..1710	0.93					
149729	ATU011669	ATL8C45501:2415..31	gap2	ATCEA4S1682	96	ATL8C45501:2415..31	0.93					
149730	ATU011670	ATL8S9783:1..578	gap2	ATCEA4C49158_1, ATCEA4S32074, ATCEA4S7922	96, 92, 89	ATL8S9783:312..543	0.93					
149731	ATU011671	ATL8C9916:153..1147	gap2	ATCEA4C10662_1	96	ATL8C9916:782..1147	0.93					
149732	ATU011672	ATL8C38925:2	gap2	ATCEA4S8354,	96, 91	ATL8C38925:2	0.93					

		478..822		ATCEA4C57033_1		390..822						
149733	ATU011673	ATL8C37819:584..1	gap2	ATCEA4S15206, ATCEA4C24651_2	96, 91	ATL8C37819:584..256	0.93					
149734	ATU011674	ATL8C13504:2876..932	gap2	ATCEA4C60153_1, ATCEA4S7631	96, 90	ATL8C13504:2825..1117	0.93					
149735	ATU011675	ATL8S23539:442..1	gap2	ATCEA4S26624	96	ATL8S23539:442..30	0.93					
149736	ATU011676	ATL8C12368:684..1659	gap2	ATCEA4C32326_1	96	ATL8C12368:890..1659	0.93					
149737	ATU011677	ATL8C38173:1645..148	gap2	ATCEA4C31040_1	96	ATL8C38173:1065..148	0.93					
149738	ATU011678	ATL8C2340:1990..1401	gap2	ATCEA4S20211	96	ATL8C2340:1990..1881	0.92					
149739	ATU011679	ATL8C12126:50..669	gap2	ATCEA4S29773	96	ATL8C12126:414..626	0.92					
149740	ATU011680	ATL8C28306:252..681	gap2	ATCEA4S5400	96	ATL8C28306:252..665	0.92					
149741	ATU011681	ATL8C20431:1..375	gap2	ATCEA4C410_1	96	ATL8C20431:320..373	0.92					
149742	ATU011682	ATL8C19599:1..326	gap2	ATCEA4C28395_1,	96, 88	ATL8C19599:2..106	0.92					

				ATCEA4S5620								
149743	ATU011683	ATL8C10728:30..700	gap2	ATCEA4C117499_1	96	ATL8C10728:180..400	0.92					
149744	ATU011684	ATL8C11636:2659..1584	gap2	ATCEA4C33157_2	96	ATL8C11636:2659..1726	0.92					
149745	ATU011685	ATL8C31214:383..1	gap2	ATCEA4C5306_1, ATCEA4S9463	96, 83	ATL8C31214:273..51	0.92					
149746	ATU011686	ATL8C24087:1..1328	gap2	ATCEA4C20086_1, ATCEA4C20086_2	96, 86	ATL8C24087:86..1271	0.92					
149747	ATU011687	ATL8C32141:763..2325	gap2	ATCEA4C64891_1, ATCEA4C64970_1	96, 89	ATL8C32141:1627..2291	0.92					
149748	ATU011688	ATL8C19426:826..52	gap2	ATCEA4S10256, ATCEA4S10257	96, 83	ATL8C19426:550..52	0.92					
149749	ATU011689	ATL8C10530:624..283	gap2	ATCEA4C154192_1	96	ATL8C10530:624..283	0.92					
149750	ATU011690	ATL8C45327:116..1460	gap2	ATCEA4S7873, ATCEA4C66617_1	96, 96	ATL8C45327:245..1460	0.92					
149751	ATU011691	ATL8C26242:756..1	gap2	ATCEA4C1265_1,	96, 92	ATL8C26242:727..18	0.92					

				ATCEA4C1265_2								
149752	ATU011692	ATL8C33504:1381..1	gap2	ATCEA4C1213_1, ATCEA4S19921	96, 89	ATL8C33504:1322..303	0.91					
149753	ATU011693	ATL8C26975:1135..21	gap2	ATCEA4S12141	96	ATL8C26975:1045..21	0.91					
149754	ATU011694	ATL8C25704:4794..3825	gap2	ATCEA4S23383	96	ATL8C25704:4794..4153	0.91					
149755	ATU011695	ATL8C10702:78..429	gap2	ATCEA4S27142	96	ATL8C10702:81..194	0.91					
149756	ATU011696	ATL8C8409:856..1	gap2	ATCEA4C11439_1	96	ATL8C8409:317..44	0.91					
149757	ATU011697	ATL8S9165:238..543	gap2	ATCEA4C25692_1	96	ATL8S9165:538..253	0.91					
149758	ATU011698	ATL8C17932:345..1	gap2	ATCEA4C43743_1	96	ATL8C17932:258..31	0.91					
149759	ATU011699	ATL8C47120:1..818	gap2	ATCEA4C19745_1, ATCEA4C7979_1, ATCEA4S15348	96, 95, 82	ATL8C47120:91..441	0.91					
149760	ATU011700	ATL8C12847:828..1622	gap2	ATCEA4C20187_1, ATCEA4C20187_2	96, 92	ATL8C12847:911..1614	0.91					
149761	ATU011701	ATL8C49153:1	gap2	ATCEA4C4510	96	ATL8C49153:1	0.91					

		244..333		1		048..333						
149762	ATU011702	ATL8C27642:149..3143	gap2	ATCEA4C5183_1, ATCEA4S7469	96, 91	ATL8C27642:149..3017	0.91					
149763	ATU011703	ATL8C4010:83..926	gap2	ATCEA4C17015_1	96	ATL8C4010:83..707	0.91					
149764	ATU011704	ATL8C37573:250..943	gap2	ATCEA4S839	96	ATL8C37573:332..943	0.91					
149765	ATU011705	ATL8S8476:1..380	gap2	ATCEA4C2042_1	96	ATL8S8476:34..331	0.90					
149766	ATU011706	ATL8C12239:1911..2542	gap2	ATCEA4C75499_1	96	ATL8C12239:1972..2306	0.90					
149767	ATU011707	ATL8C37420:1951..1078	gap2	ATCEA4C120227_1, ATCEA4S35242, ATCEA4S30834	96, 92, 84	ATL8C37420:1797..1267	0.90					
149768	ATU011708	ATL8C33330:2208..1	gap2	ATCEA4S6891, ATCEA4S2800, ATCEA4S30732	96, 91, 86	ATL8C33330:2208..71	0.90					
149769	ATU011709	ATL8S12302:1..257	gap2	ATCEA4C499_1	96	ATL8S12302:55..199	0.90					
149770	ATU011710	ATL8C22704:125..2399	gap2	ATCEA4S30561, ATCEA4C51563_1	96, 90	ATL8C22704:125..2255	0.90					

149771	ATU011711	ATL8C4 248:209..1429	gap2	ATCEA4S2765	96	ATL8C4 248:209..1429	0.90					
149772	ATU011712	ATL8C2 4022:104..1058	gap2	ATCEA4C34751_1	96	ATL8C2 4022:104..902	0.90					
149773	ATU011713	ATL8C3 1211:1219..99	gap2	ATCEA4S880	96	ATL8C3 1211:1219..99	0.90					
149774	ATU011714	ATL8C1 2905:862..1	gap2	ATCEA4C4764_1, ATCEA4S20166	96, 95	ATL8C1 2905:862..344	0.90					
149775	ATU011715	ATL8C1 157:40..710	gap2	ATCEA4C48548_1	96	ATL8C1 157:236..710	0.90					
149776	ATU011716	ATL8C1 239:66..1660	gap2	ATCEA4S1659	96	ATL8C1 239:66..1660	0.90					
149777	ATU011717	ATL8C1 1448:65..1810	gap2	ATCEA4C1743_1	96	ATL8C1 1448:121..1583	0.90					
149778	ATU011718	ATL8S5 043:518..1	gap2	ATCEA4S5168, ATCEA4C44268_1	96, 87	ATL8S5 043:466..328	0.90					
149779	ATU011719	ATL8C1 2195:1379..399	gap2	ATCEA4S1442	96	ATL8C1 2195:1379..399	0.89					
149780	ATU011720	ATL8C2 6228:341..1804	gap2	ATCEA4S1859, ATCEA4S12166	96, 87	ATL8C2 6228:696..1804	0.89					
149781	ATU011721	ATL8C1 8687:451..1671	gap2	ATCEA4C917_1, ATCEA4	96, 90, 89, 89,	ATL8C1 8687:620..1615	0.89					

				C917_12, ATCEA4S32687, ATCEA4C917_6, ATCEA4S30906, ATCEA4S35400, ATCEA4S7425, ATCEA4S31472, ATCEA4C216122	89, 88, 87, 87, 86							
149782	ATU011722	ATL8C18693:3168..2436	gap2	ATCEA4C59236_1	96	ATL8C18693:2984..2519	0.89					
149783	ATU011723	ATL8C37972:809..75	gap2	ATCEA4C116172_1	96	ATL8C37972:809..75	0.89					
149784	ATU011724	ATL8C26564:1882..1346	gap2	ATCEA4S2922, ATCEA4C532621	96, 93	ATL8C26564:1882..1532	0.89					
149785	ATU011725	ATL8C19598:1174..16	gap2	ATCEA4C22352_1, ATCEA4S32255, ATCEA4C117808_1	96, 90, 86	ATL8C19598:1113..16	0.89					
149786	ATU011	ATL8C1	gap2	ATCEA4	96	ATL8C1	0.89					

	726	2396:934..1		C73812_1		2396:934..313						
149787	ATU011727	ATL8C18157:2016..34	gap2	ATCEA4C22278_1	96	ATL8C18157:2016..498	0.89					
149788	ATU011728	ATL8C16033:651..2881	gap2	ATCEA4C54984_1, ATCEA4C20823_1	96, 94	ATL8C16033:785..2662	0.89					
149789	ATU011729	ATL8C27271:599..186	gap2	ATCEA4C30749_1	96	ATL8C27271:599..187	0.89					
149790	ATU011730	ATL8C45107:799..1764	gap2	ATCEA4S1064	96	ATL8C45107:989..1764	0.89					
149791	ATU011731	ATL8S5876:560..1	gap2	ATCEA4C77600_1, ATCEA4C77600_2	96, 93	ATL8S5876:416..201	0.88					
149792	ATU011732	ATL8S8668:1..559	gap2	ATCEA4C1779_1, ATCEA4S35915	96, 86	ATL8S8668:184..343	0.88					
149793	ATU011733	ATL8C32851:34..808	gap2	ATCEA4C44915_1	96	ATL8C32851:34..760	0.88					
149794	ATU011734	ATL8C6008:1513..108	gap2	ATCEA4S13756, ATCEA4S10246	96, 96	ATL8C6008:1513..108	0.88					
149795	ATU011735	ATL8C47753:2031..232	gap2	ATCEA4C20902_1	96	ATL8C47753:1756..360	0.88					

149796	ATU011736	ATL8S17256:251..573	gap2	ATCEA4S26816	96	ATL8S17256:251..276	0.88					
149797	ATU011737	ATL8C47350:1235..265	gap2	ATCEA4S5560	96	ATL8C47350:1062..265	0.88					
149798	ATU011738	ATL8C24306:1898..1	gap2	ATCEA4S36204	96	ATL8C24306:1898..48	0.88					
149799	ATU011739	ATL8C43847:1105..4305	gap2	ATCEA4C43490_1	96	ATL8C43847:1105..4305	0.88					
149800	ATU011740	ATL8C14604:1..665	gap2	ATCEA4C1945_1	96	ATL8C14604:74..473	0.88					
149801	ATU011741	ATL8C15174:187..1655	gap2	ATCEA4C115795_1, ATCEA4C115793_1, ATCEA4S34359	95, 93, 84	ATL8C15174:187..1443	0.88	g3080369	100	1121	7.8e-89	(AL022580) putative protein [Arabidopsis thaliana]
149802	ATU011742	ATL8C6636:831..81	gap2	ATCEA4S29805	96	ATL8C6636:831..180	0.88					
149803	ATU011743	ATL8C37136:1086..34	gap2	ATCEA4C24872_1, ATCEA4S22984	96, 82	ATL8C37136:833..34	0.88					
149804	ATU011744	ATL8C2806:470..741	gap2	ATCEA4C2789_1	96	ATL8C2806:470..736	0.88					
149805	ATU011745	ATL8C31646:4377..2178	gap2	ATCEA4C603_1, ATCEA4	96, 91, 88, 88,	ATL8C31646:3738..2385	0.88					

				C603_3, ATCEA4 C603_2, ATCEA4 S10699, ATCEA4 S25381, ATCEA4 S15816	86, 84							
149806	ATU011 746	ATL8C2 777:52 4..119 0	gap2	ATCEA4 C13983 0_1, ATCEA4 S33848	96, 91	ATL8C2 777:52 4..995	0.88					
149807	ATU011 747	ATL8S2 7370:4 50..1	gap2	ATCEA4 S36334	96	ATL8S2 7370:4 47..14 2	0.88					
149808	ATU011 748	ATL8C1 5604:2 529..6 77	gap2	ATCEA4 C24779 _1, ATCEA4 S22591, ATCEA4 S22592	96, 85, 82	ATL8C1 5604:2 529..1 085	0.87					
149809	ATU011 749	ATL8C2 9241:1 581..7 1	gap2	ATCEA4 C29834 _1, ATCEA4 C83488 _1, ATCEA4 S19130	96, 86, 83	ATL8C2 9241:1 581..8 2	0.87					
149810	ATU011 750	ATL8C4 0182:1 ..849	gap2	ATCEA4 C17937 _1	96	ATL8C4 0182:1 25..84 9	0.87					
149811	ATU011 751	ATL8C3 3529:2	gap2	ATCEA4 S4571	96	ATL8C3 3529:1	0.87					

		072..492				941..492						
149812	ATU0117752	ATL8C25218:2001..1016	gap2	ATCEA4C116700_1	96	ATL8C25218:2001..1221	0.87					
149813	ATU0117753	ATL8C49695:1087..1	gap2	ATCEA4C6545_1, ATCEA4C35834_1	96, 94	ATL8C49695:1031..21	0.87					
149814	ATU0117754	ATL8C694:1265..634	gap2	ATCEA4C20434_1	96	ATL8C694:1225..634	0.87					
149815	ATU0117755	ATL8C45628:404..1	gap2	ATCEA4S7774	96	ATL8C45628:336..39	0.87					
149816	ATU0117756	ATL8C12538:1212..4395	gap2	ATCEA4C1058_1, ATCEA4S4710, ATCEA4S3537, ATCEA4S21335, ATCEA4S4037, ATCEA4C1058_4	96, 92, 90, 90, 86, 82	ATL8C12538:1285..4395	0.87					
149817	ATU0117757	ATL8C36005:1360..333	gap2	ATCEA4C10838_1	96	ATL8C36005:1204..333	0.87					
149818	ATU0117758	ATL8C34958:1428..227	gap2	ATCEA4S2275	96	ATL8C34958:1410..227	0.87					
149819	ATU0117759	ATL8C22846:1..953	gap2	ATCEA4S36257	96	ATL8C22846:105..95	0.87					

						3						
149820	ATU011760	ATL8C25728:2592..71	gap2	ATCEA4S29576	96	ATL8C25728:2513..71	0.87					
149821	ATU011761	ATL8C6435:1890..478	gap2	ATCEA4C18909_1, ATCEA4C116840_1	96, 87	ATL8C6435:1841..478	0.87					
149822	ATU011762	ATL8C16540:1..1473	gap2	ATCEA4S12496, ATCEA4C17858_1	96, 96	ATL8C16540:136..1452	0.87					
149823	ATU011763	ATL8C7903:951..234	gap2	ATCEA4S7667	96	ATL8C7903:951..234	0.87					
149824	ATU011764	ATL8C46779:4303..1699	gap2	ATCEA4C127590_1, ATCEA4C60039_1, ATCEA4S26867, ATCEA4C60039_2	96, 95, 93, 93	ATL8C46779:4303..2016	0.87					
149825	ATU011765	ATL8C47041:558..3324	gap2	ATCEA4C33504_1, ATCEA4S17090	95, 89	ATL8C47041:558..1079, ATL8C47041:1506..3154	0.86, 0.93	g4895194	100	2266	3.6e-233	(AC007661) putative peptide transporter protein [Arabidopsis

												thaliana]
149826	ATU0117 66	ATL8C6290:1191..75	gap2	ATCEA4C168892	96	ATL8C6290:1178..75	0.86					
149827	ATU0117 67	ATL8C36176:2162..15	gap2	ATCEA4S1874	96	ATL8C36176:2162..125	0.86					
149828	ATU0117 68	ATL8C6440:1033..159	gap2	ATCEA4C46281_1	96	ATL8C6440:404..159	0.86					
149829	ATU0117 69	ATL8C10328:1520..2038	gap2	ATCEA4C2374_1, ATCEA4S20	96, 91	ATL8C10328:1635..1974	0.86					
149830	ATU0117 70	ATL8C47814:1228..39	gap2	ATCEA4S31056, ATCEA4S15652	96, 85	ATL8C47814:1224..39	0.86					
149831	ATU0117 71	ATL8C47300:70..1082	gap2	ATCEA4S32206	96	ATL8C47300:70..1079	0.86					
149832	ATU0117 72	ATL8C28476:469..1	gap2	ATCEA4S4390	96	ATL8C28476:469..46	0.86					
149833	ATU0117 73	ATL8C7439:895..266	gap2	ATCEA4S27336	96	ATL8C7439:895..586	0.86					
149834	ATU0117 74	ATL8C7657:1775..735	gap2	ATCEA4S5421	96	ATL8C7657:1648..735	0.86					
149835	ATU0117 75	ATL8C25203:930..1	gap2	ATCEA4S7020, ATCEA4C298081	96, 94	ATL8C25203:930..15	0.86					
149836	ATU0117 76	ATL8C27071:1	gap2	ATCEA4C22777	96	ATL8C27071:1	0.86					

		674..156		_1		599..156						
149837	ATU0111777	ATL8C12355:2330..794	gap2	ATCEA4C28619_1	96	ATL8C12355:1912..794	0.86					
149838	ATU0111778	ATL8S20333:120..397	gap2	ATCEA4C7132_1	96	ATL8S20333:134..222	0.85					
149839	ATU0111779	ATL8C17742:776..55	gap2	ATCEA4C7913_1	96	ATL8C17742:576..55	0.85					
149840	ATU0111780	ATL8C13928:8424..10819	gap2	ATCEA4S6261	96	ATL8C13928:8463..10819	0.85					
149841	ATU0111781	ATL8C27361:657..1	gap2	ATCEA4C149383_1, ATCEA4S32731, ATCEA4S33826, ATCEA4S25288	96, 95, 90, 82	ATL8C27361:547..103	0.85					
149842	ATU0111782	ATL8C46192:1260..103	gap2	ATCEA4C34754_1	96	ATL8C46192:1207..103	0.85					
149843	ATU0111783	ATL8C45795:359..1370	gap2	ATCEA4C117814_1, ATCEA4C59749_1	96, 87	ATL8C45795:449..1370	0.85					
149844	ATU0111784	ATL8C23254:1..597	gap2	ATCEA4S35670	96	ATL8C23254:215..597	0.85					
149845	ATU0111785	ATL8C14217:1	gap2	ATCEA4S6258	96	ATL8C14217:1	0.85					

		963..71				864..71						
149846	ATU011786	ATL8C15458:966..1	gap2	ATCEA4S4034	96	ATL8C15458:966..109	0.85					
149847	ATU011787	ATL8C36855:1..943	gap2	ATCEA4S1504	96	ATL8C36855:26..943	0.85					
149848	ATU011788	ATL8C32885:670..915	gap2	ATCEA4S100	96	ATL8C32885:738..915	0.85					
149849	ATU011789	ATL8C34336:1287..1850	gap2	ATCEA4S35742	96	ATL8C34336:1287..1850	0.85					
149850	ATU011790	ATL8C18809:283..4215	gap2	ATCEA4C20636_1	96	ATL8C18809:283..4215	0.85					
149851	ATU011791	ATL8S12197:1..265	gap2	ATCEA4C9197_1	96	ATL8S12197:156..46	0.85					
149852	ATU011792	ATL8S1196:1..178	gap2	ATCEA4C539_1	96	ATL8S1196:58..146	0.85					
149853	ATU011793	ATL8C47728:2582..505	gap2	ATCEA4S8681	96	ATL8C47728:2582..505	0.84					
149854	ATU011794	ATL8C9941:87..1005	gap2	ATCEA4C5271_1, ATCEA4S1613	96, 95	ATL8C9941:87..874	0.84					
149855	ATU011795	ATL8C3450:1999..2934	gap2	ATCEA4S32909, ATCEA4S13389	96, 92	ATL8C3450:1999..2253	0.84					
149856	ATU011796	ATL8S14371:154..30	gap2	ATCEA4S31394	96	ATL8S14371:192..29	0.84					

		7				6						
149857	ATU011797	ATL8C23680:385..2271	gap2	ATCEA4S5789	96	ATL8C23680:385..2271	0.84					
149858	ATU011798	ATL8C10459:526..4137	gap2	ATCEA4C20161_1, ATCEA4C73699_1, ATCEA4S5777	96, 92, 82	ATL8C10459:787..4137	0.84					
149859	ATU011799	ATL8C21583:611..120	gap2	ATCEA4C20908_1	96	ATL8C21583:611..125	0.84					
149860	ATU011800	ATL8C24112:1195..316	gap2	ATCEA4S8139, ATCEA4S5272	96, 86	ATL8C24112:1014..457	0.84					
149861	ATU011801	ATL8C44489:1546..459	gap2	ATCEA4C1027_1, ATCEA4S20770, ATCEA4S3347	96, 88, 85	ATL8C44489:1523..1042	0.84					
149862	ATU011802	ATL8C9747:2231..3395	gap2	ATCEA4C117163_1	96	ATL8C9747:2272..3368	0.84					
149863	ATU011803	ATL8C35173:1592..126	gap2	ATCEA4C31695_1	96	ATL8C35173:1592..126	0.84					
149864	ATU011804	ATL8C22520:530..1324	gap2	ATCEA4C44527_1, ATCEA4C7110_2	96, 92	ATL8C22520:616..1300	0.84					
149865	ATU011	ATL8C4	gap2	ATCEA4	96	ATL8C4	0.84					

	805	8498:2030..740		S2107		8498:2030..910						
149866	ATU011806	ATL8C32023:536..119	gap2	ATCEA4C10642_1, ATCEA4S16982	96, 92	ATL8C32023:504..121	0.83					
149867	ATU011807	ATL8C37437:1828..4242	gap2	ATCEA4C8344_1, ATCEA4S15526	95, 83	ATL8C37437:1991..3914	0.83	g3107903	100	291		(D83719) polycomb-like protein [Daucus carota]
149868	ATU011808	ATL8C41369:257..614	gap2	ATCEA4S30393	96	ATL8C41369:257..614	0.83					
149869	ATU011809	ATL8C21035:2158..113	gap2	ATCEA4C5763_1	96	ATL8C21035:2158..113	0.83					
149870	ATU011810	ATL8S19336:1..442	gap2	ATCEA4S10461, ATCEA4S32678, ATCEA4C4163_1	96, 89, 82	ATL8S19336:92..336	0.83					
149871	ATU011811	ATL8C35806:1205..298	gap2	ATCEA4S15061, ATCEA4C81535_1, ATCEA4C38912	96, 93, 89	ATL8C35806:1205..531	0.83					

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149872	ATU011812	ATL8S7504:44..717	gap2	ATCEA4C118089_1, ATCEA4C132713_1	96, 95	ATL8S7504:44..270	0.83					
149873	ATU011813	ATL8C18526:92..1364	gap2	ATCEA4C40547_1	96	ATL8C18526:92..1314	0.83					
149874	ATU011814	ATL8S774:1..560	gap2	ATCEA4C6624_1	96	ATL8S774:24..391	0.83					
149875	ATU011815	ATL8S16012:1..595	gap2	ATCEA4C85008_1	96	ATL8S16012:503..196	0.83					
149876	ATU011816	ATL8C37516:1443..384	gap2	ATCEA4S12752, ATCEA4C68732_1, ATCEA4S19966	96, 93, 85	ATL8C37516:1443..992	0.83					
149877	ATU011817	ATL8C9714:389..2075	gap2	ATCEA4S2949	96	ATL8C9714:389..2075	0.83					
149878	ATU011818	ATL8C21110:1..1035	gap2	ATCEA4C7582_1	96	ATL8C21110:688..1035	0.83					
149879	ATU011819	ATL8C37094:2326..940	gap2	ATCEA4S15155, ATCEA4C5227_1	96, 94	ATL8C37094:2278..1141	0.83					
149880	ATU011820	ATL8S28407:747..382	gap2	ATCEA4S24682	96	ATL8S28407:705..542	0.82					

149881	ATU011821	ATL8C33761:141..1291	gap2	ATCEA4S5634	96	ATL8C33761:634..1291	0.82					
149882	ATU011822	ATL8C37851:1357..208	gap2	ATCEA4S2347	96	ATL8C37851:1357..396	0.82					
149883	ATU011823	ATL8C22730:1940..343	gap2	ATCEA4C77176_1	95	ATL8C22730:1444..343	0.82	g2961383	100	414	1.8e-38	(AL022141) putative protein [Arabidopsis thaliana]
149884	ATU011824	ATL8C41247:735..318	gap2	ATCEA4C24729_1	96	ATL8C41247:411..319	0.82					
149885	ATU011825	ATL8C50141:851..2279	gap2	ATCEA4S733	95	ATL8C50141:851..2279	0.82	g2244884	100	2038	6.6e-196	(Z97338) glucosyltransferase [Arabidopsis thaliana]
149886	ATU011826	ATL8C3823:1820..1	gap2	ATCEA4S31187, ATCEA4C26257_1	96, 83	ATL8C3823:1465..83	0.82					
149887	ATU011827	ATL8S5204:588..2	gap2	ATCEA4S149	96	ATL8S5204:494..12	0.82					
149888	ATU011828	ATL8C19460:49..575	gap2	ATCEA4C5415_1,	96, 89	ATL8C19460:49..473	0.82					

				ATCEA4S20010								
149889	ATU011829	ATL8C33486:1537..438	gap2	ATCEA4S2177	96	ATL8C33486:1537..644	0.82					
149890	ATU011830	ATL8C22400:4488..2551	gap2	ATCEA4C75550_1, ATCEA4S34117, ATCEA4S4134, ATCEA4C26919_1	96, 91, 83, 82	ATL8C22400:4319..2701	0.82					
149891	ATU011831	ATL8C48507:1..1228	gap2	ATCEA4C23353_1	95	ATL8C48507:464..1214	0.82	g1370160	100	915	2.2e-90	(Z73958) RAB11J [Lotus japonicus]
149892	ATU011832	ATL8C10332:1757..160	gap2	ATCEA4C79076_1, ATCEA4S34703, ATCEA4C18030_1, ATCEA4S30032, ATCEA4S7454	96, 96, 94, 91, 88	ATL8C10332:1697..270	0.82					
149893	ATU011833	ATL8S16376:257..1	gap2	ATCEA4C24327_1, ATCEA4C24327_2	96, 95	ATL8S16376:225..172	0.82					
149894	ATU011	ATL8C1	gap2	ATCEA4	96	ATL8C1	0.82					

	834	8083:905..132		C119292_1		8083:905..137						
149895	ATU011835	ATL8C12666:583..1429	gap2	ATCEA4C45936_1	96	ATL8C12666:583..1393	0.82					
149896	ATU011836	ATL8C5932:188..596	gap2	ATCEA4C117572_1, ATCEA4C430721	96, 85	ATL8C5932:188..345	0.82					
149897	ATU011837	ATL8C48973:91..1905	gap2	ATCEA4S32417	96	ATL8C48973:91..1905	0.82					
149898	ATU011838	ATL8C46133:1996..2714	gap2	ATCEA4S2834	96	ATL8C46133:2284..2714	0.82					
149899	ATU011839	ATL8C42441:1794..348	gap2	ATCEA4C34341_1	96	ATL8C42441:1628..348	0.82					
149900	ATU011840	ATL8C12338:15..2143	gap2	ATCEA4C16179_1, ATCEA4S1724, ATCEA4S7839	96, 94, 87	ATL8C12338:63..2143	0.82					
149901	ATU011841	ATL8C27228:569..1	gap2	ATCEA4C490_1, ATCEA4S27509	96, 93	ATL8C27228:510..137	0.82					
149902	ATU011842	ATL8C32764:11366..1	gap2	ATCEA4S17149, ATCEA4C357931	96, 87	ATL8C32764:1132..35	0.82					
149903	ATU011	ATL8C3	gap2	ATCEA4	96,	ATL8C3	0.82					

	843	9531:1554..673		S33189, ATCEA4S28516, ATCEA4S27204, ATCEA4S32604	94, 90, 88	9531:1483..1018						
149904	ATU011844	ATL8C49245:2273..153	gap2	ATCEA4C17595_1, ATCEA4S31246, ATCEA4S29685	96, 95, 92	ATL8C49245:2273..156	0.82					
149905	ATU011845	ATL8S9444:23..420	gap2	ATCEA4S32204	96	ATL8S9444:29..307	0.82					
149906	ATU011846	ATL8C8782:1350..420	gap2	ATCEA4S2100	96	ATL8C8782:1251..420	0.82					
149907	ATU011847	ATL8C44595:1752..219	gap2	ATCEA4C304_1	96	ATL8C44595:1614..494	0.82					
149908	ATU011848	ATL8C43496:333..2419	gap2	ATCEA4C28792_2, ATCEA4C28792_1	96, 91	ATL8C43496:333..2419	0.81					
149909	ATU011849	ATL8C16566:1..565	gap2	ATCEA4S6550	96	ATL8C16566:62..565	0.81					
149910	ATU011850	ATL8C3760:1733..1230	gap2	ATCEA4S801	96	ATL8C3760:1688..1230	0.81					
149911	ATU011851	ATL8C33296:2	gap2	ATCEA4S26442	96	ATL8C33296:2	0.81					

		579..1				579..98						
149912	ATU011852	ATL8C13881:176..1392	gap2	ATCEA4S2294	96	ATL8C13881:176..1384	0.81					
149913	ATU011853	ATL8C24524:204..520	gap2	ATCEA4C3989_1	96	ATL8C24524:225..434	0.81					
149914	ATU011854	ATL8C28459:306..1	gap2	ATCEA4S2464	96	ATL8C28459:222..106	0.81					
149915	ATU011855	ATL8C16863:744..1066	gap2	ATCEA4S1829	96	ATL8C16863:744..1063	0.81					
149916	ATU011856	ATL8C31624:864..159	gap2	ATCEA4S35766	96	ATL8C31624:864..182	0.81					
149917	ATU011857	ATL8C35354:1968..2719	gap2	ATCEA4C44869_1	96	ATL8C35354:2033..2719	0.81					
149918	ATU011858	ATL8C14947:14..1718	gap2	ATCEA4C70017_1	96	ATL8C14947:14..1482	0.81					
149919	ATU011859	ATL8C39956:306..1187	gap2	ATCEA4C2322_1, ATCEA4S29890	96, 90	ATL8C39956:655..1030	0.81					
149920	ATU011860	ATL8S691:201..480	gap2	ATCEA4C119496_1	96	ATL8S691:202..252	0.81					
149921	ATU011861	ATL8C18716:174..1115	gap2	ATCEA4C18732_1	96	ATL8C18716:174..978	0.80					
149922	ATU011862	ATL8C19844:1	gap2	ATCEA4C7808	96	ATL8C19844:4	0.80					

		27..1115		1		81..1115						
149923	ATU011863	ATL8C42453:3486..321	gap2	ATCEA4S33504	95	ATL8C42453:3486..325	0.80	g3928084	100	1214	6.2e-139	(AC005770) retrotransposon-like protein [Arabidopsis thaliana]
149924	ATU011864	ATL8C46409:158..1265	gap2	ATCEA4C130477_1, ATCEA4C50803_1	96, 92	ATL8C46409:340..1083	0.80					
149925	ATU011865	ATL8C27638:332..1402	gap2	ATCEA4S48	96	ATL8C27638:422..1402	0.80					
149926	ATU011866	ATL8C185:1..1879	gap2	ATCEA4C25014_2, ATCEA4S12484, ATCEA4S33148, ATCEA4C25014_1, ATCEA4C95855_2, ATCEA4S27055, ATCEA4C95855_1	96, 95, 93, 91, 91, 89, 89	ATL8C185:165..1595	0.80					

149927	ATU011867	ATL8C48731:113..1827	gap2	ATCEA4S35935, ATCEA4C12139_1, ATCEA4S31913	96, 91, 89	ATL8C48731:165..1827	0.80					
149928	ATU011868	ATL8C9402:52..3339	gap2	ATCEA4C27185_1, ATCEA4C11146_1, ATCEA4S9066	96, 96, 92	ATL8C9402:52..3196	0.80					
149929	ATU011869	ATL8C46623:8519..5928	gap2	ATCEA4C68744_1	96	ATL8C46623:8483..5928	0.80					
149930	ATU011870	ATL8C36202:1..2600	gap2	ATCEA4C75_1	96	ATL8C36202:51..2600	0.80					
149931	ATU011871	ATL8C1266:2137..1	gap2	ATCEA4S31350, ATCEA4S36362, ATCEA4S25648, ATCEA4S35109	96, 85, 85, 82	ATL8C1266:2098..90	0.79					
149932	ATU011872	ATL8C8457:150..1429	gap2	ATCEA4C18847_1	95	ATL8C8457:185..1334	0.79	g4539408	100	684	1.0e-36	(AL049524) putative alpha NAC [Arabidopsis thalia

												na]
149933	ATU011873	ATL8C1736:315..627	gap2	ATCEA4C122323_1	96	ATL8C1736:318..417	0.79					
149934	ATU011874	ATL8C28614:1..629	gap2	ATCEA4C244_1	96	ATL8C28614:61..428	0.79					
149935	ATU011875	ATL8C17985:1554..101	gap2	ATCEA4C14992_1	96	ATL8C17985:1420..101	0.79					
149936	ATU011876	ATL8C8176:1365..709	gap2	ATCEA4C11513_1	96	ATL8C8176:1008..709	0.79					
149937	ATU011877	ATL8C28029:1124..1	gap2	ATCEA4C94252_2, ATCEA4C94252_1	96, 96	ATL8C28029:1124..141	0.79					
149938	ATU011878	ATL8C2428:1..343	gap2	ATCEA4C1779_1	96	ATL8C2428:31..332	0.79					
149939	ATU011879	ATL8C537:164..733	gap2	ATCEA4C28833_1, ATCEA4S28977, ATCEA4S35537	96, 93, 89	ATL8C537:217..600	0.79					
149940	ATU011880	ATL8C49284:1619..25	gap2	ATCEA4S1347	96	ATL8C49284:1619..25	0.79					
149941	ATU011881	ATL8C1451:1033..242	gap2	ATCEA4S32608, ATCEA4C7730_3, ATCEA4S7731,	96, 96, 90, 88	ATL8C1451:1033..248	0.79					

				ATCEA4S14820								
149942	ATU011882	ATL8C36425:1692..39	gap2	ATCEA4S28384, ATCEA4S34110, ATCEA4S25673	96, 93, 89	ATL8C36425:1678..39	0.79					
149943	ATU011883	ATL8C43157:475..103	gap2	ATCEA4C28035_1	96	ATL8C43157:426..103	0.78					
149944	ATU011884	ATL8C30213:1629..1	gap2	ATCEA4S2477, ATCEA4S1587	96, 94	ATL8C30213:1629..567	0.78					
149945	ATU011885	ATL8S27598:1..481	gap2	ATCEA4C17630_1	96	ATL8S27598:93..466	0.78					
149946	ATU011886	ATL8C61:2216..346	gap2	ATCEA4S33394	96	ATL8C61:2216..484	0.78					
149947	ATU011887	ATL8C48567:983..1	gap2	ATCEA4S12886, ATCEA4S2771	96, 90	ATL8C48567:901..7	0.78					
149948	ATU011888	ATL8C17712:6316..1	gap2	ATCEA4S35804, ATCEA4S4661, ATCEA4S33844, ATCEA4C6940_1, ATCEA4S6922	95, 88, 86, 84, 84	ATL8C17712:5642..407	0.78	g4049341, g3560166	100, 72	554, 401	6.4e-37, 1.2e-35	(AL034567) putative protein [Arabidopsis thaliana]; (AL031525) ubiquitin carbox

												yl-terminal hydrolase [Schizosaccharomyces pombe]
149949	ATU011889	ATL8C48596:17..745	gap2	ATCEA4C47229_1	96	ATL8C48596:229..503	0.78					
149950	ATU011890	ATL8S9491:475..58	gap2	ATCEA4S34343	96	ATL8S9491:475..157	0.78					
149951	ATU011891	ATL8C25235:1163..1	gap2	ATCEA4C7081_1, ATCEA4S10114	96, 84	ATL8C25235:853..21	0.78					
149952	ATU011892	ATL8C20147:3844..2692	gap2	ATCEA4C74599_1	96	ATL8C20147:3485..2692	0.78					
149953	ATU011893	ATL8C40791:181..553	gap2	ATCEA4C6889_1	96	ATL8C40791:223..498	0.78					
149954	ATU011894	ATL8C34997:2974..82	gap2	ATCEA4C86743_1, ATCEA4C29807_1	95, 93	ATL8C34997:2841..273	0.77	g3549672	100	736	6.1e-62	(AL031394) putative protein [Arabidopsis thaliana]
149955	ATU011895	ATL8C47949:594..1513	gap2	ATCEA4S4683, ATCEA4C68662	96, 84	ATL8C47949:667..1288	0.77					

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149956	ATU011896	ATL8C24260:1..390	gap2	ATCEA4S7746	96	ATL8C24260:197..390	0.77					
149957	ATU011897	ATL8C12893:1212..850	gap2	ATCEA4C8568_2, ATCEA4S33210	96, 93	ATL8C12893:1122..1037	0.76					
149958	ATU011898	ATL8C21851:1..4891	gap2	ATCEA4S344, ATCEA4S27399, ATCEA4S178, ATCEA4S253	95, 94, 94, 84	ATL8C21851:4891..10	0.76	g4038066	100	720	2.3e-34	(AC005897) hypothetical protein [Arabidopsis thaliana]
149959	ATU011899	ATL8C3301:2049..959	gap2	ATCEA4C82117_1, ATCEA4C116692_1	96, 90	ATL8C3301:2041..1179	0.76					
149960	ATU011900	ATL8C20596:3059..39	gap2	ATCEA4S1756, ATCEA4C140722_1	96, 92	ATL8C20596:2955..39	0.76					
149961	ATU011901	ATL8C45047:546..13	gap2	ATCEA4C15179_1	96	ATL8C45047:546..306	0.76					
149962	ATU011902	ATL8C5942:4334..5411	gap2	ATCEA4S2275	96	ATL8C5942:4334..5411	0.76					
149963	ATU011903	ATL8C6500:1..690	gap2	ATCEA4S33007, ATCEA4S28430	96, 93	ATL8C6500:156..493	0.76					

149964	ATU011904	ATL8C10183:1..622	gap2	ATCEA4C122274_1, ATCEA4S35773	96, 96	ATL8C10183:114..594	0.76					
149965	ATU011905	ATL8C24030:1294..534	gap2	ATCEA4C622_1, ATCEA4S33355	96, 93	ATL8C24030:1124..719	0.76					
149966	ATU011906	ATL8C24904:163..1220	gap2	ATCEA4S19865, ATCEA4C46829_2, ATCEA4S2587	96, 94, 87	ATL8C24904:163..885	0.76					
149967	ATU011907	ATL8C3724:276..3183	gap2	ATCEA4C31120_1	96	ATL8C3724:800..3183	0.76					
149968	ATU011908	ATL8C2900:3442..1491	gap2	ATCEA4C102108_1	96	ATL8C2900:3442..1728	0.76					
149969	ATU011909	ATL8C48730:2266..1	gap2	ATCEA4S28393, ATCEA4C103085_2	96, 91	ATL8C48730:2266..47	0.76					
149970	ATU011910	ATL8C48385:1499..327	gap2	ATCEA4C1748_1, ATCEA4S5603	96, 94	ATL8C48385:968..422	0.76					
149971	ATU011911	ATL8C33331:45..824	gap2	ATCEA4C23321_1	96	ATL8C33331:85..819	0.76					
149972	ATU011912	ATL8C46277:4093..1058	gap2	ATCEA4S60	95	ATL8C46277:4093..1058	0.75	g4586066	100	2340	9.5e-252	(AC006194) putative pol

												polyprotein, 3' partial [Arabidopsis thaliana]
149973	ATU011913	ATL8C2798:86..2042	gap2	ATCEA4C120171_1	96	ATL8C2798:86..2042	0.75					
149974	ATU011914	ATL8C29862:1070..756	gap2	ATCEA4C866_1	96	ATL8C29862:794..756	0.75					
149975	ATU011915	ATL8C32203:1649..190	gap2	ATCEA4C28618_1	96	ATL8C32203:1649..464	0.75					
149976	ATU011916	ATL8C35504:119..1289	gap2	ATCEA4S2083	96	ATL8C35504:119..1285	0.75					
149977	ATU011917	ATL8C33283:1318..239	gap2	ATCEA4S30901	96	ATL8C33283:1292..239	0.75					
149978	ATU011918	ATL8C21464:126..526	gap2	ATCEA4S2779	96	ATL8C21464:172..395	0.75					
149979	ATU011919	ATL8C21416:284..1229	gap2	ATCEA4C32240_2, ATCEA4C32240_1	96, 94	ATL8C21416:439..920	0.75					
149980	ATU011920	ATL8C11768:184..1364	gap2	ATCEA4C30033_2, ATCEA4C30033_1	96, 86	ATL8C11768:315..1364	0.75					

149981	ATU011921	ATL8C35379:601..5014	gap2	ATCEA4C116672_1	96	ATL8C35379:601..5014	0.75					
149982	ATU011922	ATL8C5798:1..2390	gap2	ATCEA4C69410_2, ATCEA4S33809, ATCEA4S23989	95, 88, 83	ATL8C5798:88..771	0.75	g2827703, g4580467	100, 48	114, 685		(AL021684) predicted protein [Arabidopsis thaliana]; (AC006081) putative protein phosphatase; similar to protein phosphatase 2C from Mesembryanthemum [Arabidopsis thaliana]
149983	ATU011923	ATL8C25298:2331..92	gap2	ATCEA4S3263	96	ATL8C25298:2331..92	0.74					
149984	ATU011924	ATL8C34987:634..1	gap2	ATCEA4C22920_1	96	ATL8C34987:576..374	0.74					

149985	ATU011925	ATL8C21318:1086..1	gap2	ATCEA4C29480_1	96	ATL8C21318:1086..120	0.74					
149986	ATU011926	ATL8C15387:1560..246	gap2	ATCEA4S35310, ATCEA4S32748, ATCEA4S32747	96, 94, 87	ATL8C15387:1482..350	0.74					
149987	ATU011927	ATL8S25267:675..33	gap2	ATCEA4C5842_2, ATCEA4S26076	96, 85	ATL8S25267:33..675	0.74					
149988	ATU011928	ATL8C2511:3169..36	gap2	ATCEA4S2855, ATCEA4S3117, ATCEA4C4140_2	96, 96, 86	ATL8C2511:3126..36	0.74					
149989	ATU011929	ATL8C13827:1..849	gap2	ATCEA4S5941	96	ATL8C13827:4..849	0.74					
149990	ATU011930	ATL8C8023:29..473	gap2	ATCEA4C59527_1	96	ATL8C8023:63..473	0.74					
149991	ATU011931	ATL8C11978:1810..374	gap2	ATCEA4C6328_1	96	ATL8C11978:1762..374	0.74					
149992	ATU011932	ATL8C17888:1110..293	gap2	ATCEA4C41148_1	96	ATL8C17888:1110..293	0.74					
149993	ATU011933	ATL8C5738:461..1	gap2	ATCEA4C42565_1	96	ATL8C5738:461..7	0.74					
149994	ATU011934	ATL8C38695:2195..2	gap2	ATCEA4C6818_1	95	ATL8C38695:2155..2	0.74	g404690	100	1200	5.5e-136	(L19075) cytoch

		05				17						rome P450 [Catharanthus roseus]
149995	ATU011935	ATL8C33616:3435..33	gap2	ATCEA4S4564, ATCEA4S7812	96, 95	ATL8C33616:3435..33	0.74					
149996	ATU011936	ATL8C494:6076..5498	gap2	ATCEA4C75651_1	96	ATL8C494:6007..5846	0.73					
149997	ATU011937	ATL8C4659:540..1	gap2	ATCEA4C8071_1	96	ATL8C4659:540..49	0.73					
149998	ATU011938	ATL8C34537:1445..795	gap2	ATCEA4C74349_1, ATCEA4S33320	96, 95	ATL8C34537:1415..967	0.73					
149999	ATU011939	ATL8C36758:1094..154	gap2	ATCEA4S5427	96	ATL8C36758:1094..154	0.73					
150000	ATU011940	ATL8C33212:52..2175	gap2	ATCEA4S2999, ATCEA4S19049	96, 94	ATL8C33212:305..2049	0.73					
150001	ATU011941	ATL8C24637:5391..2682	gap2	ATCEA4C31480_1, ATCEA4S14536	96, 93	ATL8C24637:5391..2905	0.73					
150002	ATU011942	ATL8C28716:521..1	gap2	ATCEA4C874_1	96	ATL8C28716:511..33	0.73					
150003	ATU011943	ATL8C20922:989..82	gap2	ATCEA4S33199	96	ATL8C20922:989..230	0.73					
150004	ATU011	ATL8C3	gap2	ATCEA4	96	ATL8C3	0.73					

	944	8366:2362..204		C32343_1		8366:1810..204						
150005	ATU011945	ATL8C19441:705..2823	gap2	ATCEA4S6199	96	ATL8C19441:741..2823	0.73					
150006	ATU011946	ATL8C6891:939..2150	gap2	ATCEA4S1611	96	ATL8C6891:939..2150	0.73					
150007	ATU011947	ATL8C47555:822..1	gap2	ATCEA4S6241, ATCEA4S200	96, 88	ATL8C47555:822..321	0.73					
150008	ATU011948	ATL8C35229:1..982	gap2	ATCEA4S2775	96	ATL8C35229:3..982	0.73					
150009	ATU011949	ATL8S17809:374..1	gap2	ATCEA4C149346_1	96	ATL8S17809:374..91	0.72					
150010	ATU011950	ATL8C11817:1..1228	gap2	ATCEA4C6286_1, ATCEA4S7297	96, 94	ATL8C11817:149..1228	0.72					
150011	ATU011951	ATL8C11669:92..936	gap2	ATCEA4C93484_1	96	ATL8C11669:92..699	0.72					
150012	ATU011952	ATL8C38416:1104..506	gap2	ATCEA4C23874_1, ATCEA4C23874_2	96, 96	ATL8C38416:1104..704	0.72					
150013	ATU011953	ATL8S19841:219..1	gap2	ATCEA4S29870, ATCEA4S29890, ATCEA4C2322_1	96, 93, 90	ATL8S19841:157..77	0.72					

150014	ATU011954	ATL8C34889:390..1284	gap2	ATCEA4C19751_1	96	ATL8C34889:439..1280	0.72					
150015	ATU011955	ATL8C427:1404..107	gap2	ATCEA4S4917	96	ATL8C427:1235..107	0.72					
150016	ATU011956	ATL8C22288:225..2901	gap2	ATCEA4C31011_1, ATCEA4C17733_1	95, 87	ATL8C22288:225..2430	0.72	g2104536	100	1681	6.3e-137	(AF001308) predicted glycosyl transferase [Arabidopsis thaliana]
150017	ATU011957	ATL8C33783:696..1518	gap2	ATCEA4C9001_1	96	ATL8C33783:945..1231	0.72					
150018	ATU011958	ATL8C1386:4111..509	gap2	ATCEA4S27407	96	ATL8C1386:4111..509	0.72					
150019	ATU011959	ATL8C5724:1542..698	gap2	ATCEA4C101531_1	96	ATL8C5724:1233..1121	0.71					
150020	ATU011960	ATL8C3,4431:1506..1	gap2	ATCEA4S33566, ATCEA4C7810_1, ATCEA4S28549, ATCEA4S1883	96, 96, 95, 91	ATL8C34431:1468..177	0.71					
150021	ATU011961	ATL8C38609:2	gap2	ATCEA4C8627_	96	ATL8C38609:2	0.71					

		44..1697		1		44..1510						
150022	ATU011962	ATL8C1308:2044..280	gap2	ATCEA4C25183_1	96	ATL8C1308:2043..280	0.71					
150023	ATU011963	ATL8C37519:1..884	gap2	ATCEA4C32420_1, ATCEA4C32420_2, ATCEA4S6997	96, 91, 85	ATL8C37519:38..501	0.71					
150024	ATU011964	ATL8S13057:1..563	gap2	ATCEA4C1233_1, ATCEA4S26350, ATCEA4S26942, ATCEA4S27017, ATCEA4S36012, ATCEA4S13802, ATCEA4S30191	96, 95, 95, 94, 91, 90, 84	ATL8S13057:532..108	0.71					
150025	ATU011965	ATL8C10464:1..1014	gap2	ATCEA4S7047, ATCEA4S35338	96, 85	ATL8C10464:34..981	0.71					
150026	ATU011966	ATL8C21059:1541..1057	gap2	ATCEA4C69697_1, ATCEA4S33171,	96, 96, 90	ATL8C21059:1490..1372	0.71					

				ATCEA4C696972								
150027	ATU011967	ATL8C35663:1..1078	gap2	ATCEA4C25139_1, ATCEA4S33291	96, 92	ATL8C35663:148..837	0.71					
150028	ATU011968	ATL8C16306:8..2145	gap2	ATCEA4S3211, ATCEA4S565, ATCEA4S2569, ATCEA4C5389_1	96, 94, 94, 91	ATL8C16306:182..1572	0.71					
150029	ATU011969	ATL8C9175:944..1	gap2	ATCEA4C4599_1	96	ATL8C9175:592..171	0.71					
150030	ATU011970	ATL8C2991:1..1595	gap2	ATCEA4C5448_2, ATCEA4C543_10, ATCEA4C5448_1, ATCEA4S13217	96, 96, 89, 88	ATL8C2991:330..1513	0.71					
150031	ATU011971	ATL8C26843:807..211	gap2	ATCEA4C32284_1, ATCEA4C32284_2, ATCEA4S5859	96, 84, 82	ATL8C26843:720..211	0.70					
150032	ATU011972	ATL8C47107:731..1729	gap2	ATCEA4S9374	96	ATL8C47107:731..1729	0.70					
150033	ATU011	ATL8C3	gap2	ATCEA4	95	ATL8C3	0.70	g81628	100	1016	1.8e-	glycin

	973	087:2203..917		C659_1		087:1421..1098					17	e-rich protein atGRP-6 - Arabidopsis thaliana [Arabidopsis thaliana]
150034	ATU011974	ATL8C15564:531..1	gap2	ATCEA4C108961_1	96	ATL8C15564:531..382	0.70					
150035	ATU011975	ATL8C35327:1..2114	gap2	ATCEA4S5017	96	ATL8C35327:225..2114	0.70					
150036	ATU011976	ATL8C32163:2647..8086	gap2	ATCEA4S126, ATCEA4S178, ATCEA4S344, ATCEA4S27399, ATCEA4S253	95, 94, 93, 92, 87	ATL8C32163:3788..7992	0.70	g4038066, g4115361	100, 34	767, 163	1.5e-28, 1.5e-14	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AC005957) hypothetical protein [Arabidopsis thaliana]
150037	ATU011977	ATL8C28711:144..1613	gap2	ATCEA4C2081_1	96	ATL8C28711:308..1505	0.69					

150038	ATU011978	ATL8C6107:400..1	gap2	ATCEA4S30829	96	ATL8C6107:351..55	0.69					
150039	ATU011979	ATL8C6108:1..318	gap2	ATCEA4S29736	96	ATL8C6108:219..318	0.69					
150040	ATU011980	ATL8C15539:1..476	gap2	ATCEA4C28419_1	96	ATL8C15539:75..476	0.69					
150041	ATU011981	ATL8C7679:4957..3073	gap2	ATCEA4C13077_1	96	ATL8C7679:4888..3073	0.69					
150042	ATU011982	ATL8C27688:1623..63	gap2	ATCEA4S11979, ATCEA4S35985	96, 84	ATL8C27688:1623..206	0.69					
150043	ATU011983	ATL8C26599:1578..2517	gap2	ATCEA4S4566, ATCEA4C691_1	96, 92	ATL8C26599:2343..2516	0.69					
150044	ATU011984	ATL8C45177:54..1728	gap2	ATCEA4C19424_1, ATCEA4S36059	96, 85	ATL8C45177:121..1665	0.69					
150045	ATU011985	ATL8C22209:399..156	gap2	ATCEA4C119479_1	96	ATL8C22209:399..156	0.69					
150046	ATU011986	ATL8C23457:71..3126	gap2	ATCEA4S4813, ATCEA4S31991	95, 93	ATL8C23457:913..3126	0.69	g2702364	100	254	2.1e-13	(AF036706) No definition line found [Caenorhabditis elegans]
150047	ATU011	ATL8C3	gap2	ATCEA4	96, 88	ATL8C3	0.69					

	987	5977:1602..110		C12544_1, ATCEA4S7357		5977:1602..110						
150048	ATU011988	ATL8C45929:962..25	gap2	ATCEA4C101422_1	96	ATL8C45929:822..25	0.69					
150049	ATU011989	ATL8S6999:18..347	gap2	ATCEA4S1206	96	ATL8S6999:18..105	0.68					
150050	ATU011990	ATL8S7352:1..279	gap2	ATCEA4C531631	96	ATL8S7352:79..279	0.68					
150051	ATU011991	ATL8C26876:117..1	gap2	ATCEA4C330591	96	ATL8C26876:88..28	0.68					
150052	ATU011992	ATL8C30662:2109..534	gap2	ATCEA4C102049_1	96	ATL8C30662:2109..701	0.68					
150053	ATU011993	ATL8C34620:892..101	gap2	ATCEA4C33060_1, ATCEA4C84464_1	96, 95	ATL8C34620:892..698	0.68					
150054	ATU011994	ATL8C37259:1365..1	gap2	ATCEA4S418, ATCEA4S31808	96, 90	ATL8C37259:1365..207	0.68					
150055	ATU011995	ATL8C1923:739..1	gap2	ATCEA4C6010_1, ATCEA4S5989, ATCEA4S30439	96, 96, 95	ATL8C1923:512..14	0.68					
150056	ATU011996	ATL8C25809:2093..319	gap2	ATCEA4S5237, ATCEA4S26510	96, 88	ATL8C25809:2093..670	0.68					
150057	ATU011997	ATL8C26913:4333..1	gap2	ATCEA4S8684	96	ATL8C26913:4333..1	0.68					

		57				57						
150058	ATU011998	ATL8C32043:559..1097	gap2	ATCEA4C26875_1	96	ATL8C32043:629..770	0.68					
150059	ATU011999	ATL8S16955:593..118	gap2	ATCEA4C102787_1, ATCEA4S31792	96, 82	ATL8S16955:471..118	0.68					
150060	ATU012000	ATL8C16494:919..166	gap2	ATCEA4S26217	96	ATL8C16494:896..232	0.67					
150061	ATU012001	ATL8C37815:2300..446	gap2	ATCEA4S11836	96	ATL8C37815:2073..446	0.67					
150062	ATU012002	ATL8C37814:671..2481	gap2	ATCEA4S5595	96	ATL8C37814:671..2481	0.67					
150063	ATU012003	ATL8C5491:698..1	gap2	ATCEA4S749, ATCEA4C33228_1	96, 88	ATL8C5491:548..411	0.67					
150064	ATU012004	ATL8C4795:328..1671	gap2	ATCEA4S7747	96	ATL8C4795:328..1671	0.67					
150065	ATU012005	ATL8C48659:130..1902	gap2	ATCEA4S3640	96	ATL8C48659:130..1813	0.67					
150066	ATU012006	ATL8C18284:67..342	gap2	ATCEA4S13319	96	ATL8C18284:67..226	0.66					
150067	ATU012007	ATL8C24477:338..991	gap2	ATCEA4C26692_1	96	ATL8C24477:463..827	0.66					
150068	ATU012008	ATL8C13804:4	gap2	ATCEA4C17246	96	ATL8C13804:4	0.66					

		65..126		_1		65..128						
150069	ATU012009	ATL8C27279:13664..11479	gap2	ATCEA4S4752, ATCEA4S222	95, 82	ATL8C27279:13502..11479	0.66	g4589959	100	167		(AC007169) hypothetical protein [Arabidopsis thaliana]
150070	ATU012010	ATL8C17427:1..533	gap2	ATCEA4C25244_3, ATCEA4C25244_1, ATCEA4S31322	96, 95, 93	ATL8C17427:78..158	0.66					
150071	ATU012011	ATL8S10908:46..535	gap2	ATCEA4C21867_1	96	ATL8S10908:57..461	0.66					
150072	ATU012012	ATL8C31557:3387..2699	gap2	ATCEA4S30092	96	ATL8C31557:3387..2699	0.65					
150073	ATU012013	ATL8C49187:1..462	gap2	ATCEA4C21023_1	96	ATL8C49187:190..462	0.65					
150074	ATU012014	ATL8C47109:2393..3538	gap2	ATCEA4C590_1	96	ATL8C47109:2393..3211	0.65					
150075	ATU012015	ATL8S3251:581..1	gap2	ATCEA4C302_1	96	ATL8S3251:478..60	0.65					
150076	ATU012016	ATL8C228:9872..8310	gap2	ATCEA4S178, ATCEA4S253	96, 87	ATL8C228:9872..8310	0.64					
150077	ATU012017	ATL8S6302:14	gap2	ATCEA4C13024	96	ATL8S6302:15	0.64					

		3..575		3_1		1..442						
150078	ATU012018	ATL8C40336:1..1166	gap2	ATCEA4C33756_1, ATCEA4S6712	96, 94	ATL8C40336:65..1018	0.64					
150079	ATU012019	ATL8C32506:488..90	gap2	ATCEA4C69974_1	96	ATL8C32506:473..92	0.64					
150080	ATU012020	ATL8C13600:1474..111	gap2	ATCEA4C118852_1, ATCEA4C17527_1	96, 94	ATL8C13600:1400..111	0.64					
150081	ATU012021	ATL8S16972:436..1	gap2	ATCEA4C1897_1	96	ATL8S16972:204..30	0.64					
150082	ATU012022	ATL8C28759:428..1	gap2	ATCEA4S27395	96	ATL8C28759:428..18	0.64					
150083	ATU012023	ATL8C45111:64..3240	gap2	ATCEA4S1316, ATCEA4S1154, ATCEA4S11610, ATCEA4C27053_1	96, 96, 96, 95	ATL8C45111:64..3240	0.64					
150084	ATU012024	ATL8C32646:125..4837	gap2	ATCEA4S867	96	ATL8C32646:125..4837	0.64					
150085	ATU012025	ATL8C30321:546..41	gap2	ATCEA4C15828_1, ATCEA4S24212	96, 91	ATL8C30321:377..46	0.64					
150086	ATU012026	ATL8S3284:614..117	gap2	ATCEA4C27989_1	96	ATL8S3284:440..117	0.64					
150087	ATU012	ATL8C3	gap2	ATCEA4	96	ATL8C3	0.64					

	027	4056:688..55		C30357_1		4056:521..55						
150088	ATU012028	ATL8S24817:329..431	gap2	ATCEA4C35539_1	96	ATL8S24817:372..431	0.64					
150089	ATU012029	ATL8C39099:3084..1	gap2	ATCEA4S3575	95	ATL8C39099:3084..49	0.63	g2244752	100	1076	5.7e-89	(Z97335) hypothetical protein [Arabidopsis thaliana]
150090	ATU012030	ATL8C35652:1..1900	gap2	ATCEA4S6250, ATCEA4S13350	96, 91	ATL8C35652:148..1698	0.63					
150091	ATU012031	ATL8C39366:394..1	gap2	ATCEA4S976	96	ATL8C39366:394..24	0.63					
150092	ATU012032	ATL8C9311:699..1444	gap2	ATCEA4S35017	96	ATL8C9311:816..1145	0.63					
150093	ATU012033	ATL8C11461:149..716	gap2	ATCEA4S34479	96	ATL8C11461:187..716	0.63					
150094	ATU012034	ATL8S18109:389..199	gap2	ATCEA4S9929	96	ATL8S18109:389..199	0.63					
150095	ATU012035	ATL8C48796:971..385	gap2	ATCEA4S13712	96	ATL8C48796:941..385	0.63					
150096	ATU012036	ATL8C648:2771..6034	gap2	ATCEA4C18586_1	95	ATL8C648:2771..6021	0.63	g3242713	100	2694	1.3e-272	(AC003040) putative transp

												osase [Arabidopsis thaliana]
150097	ATU012037	ATL8C5322:943..2545	gap2	ATCEA4S13123	96	ATL8C5322:943..2545	0.62					
150098	ATU012038	ATL8S26051:542..80	gap2	ATCEA4C85550_1	96	ATL8S26051:542..80	0.62					
150099	ATU012039	ATL8C33736:1134..124	gap2	ATCEA4C16633_1	96	ATL8C33736:744..155	0.62					
150100	ATU012040	ATL8C17337:6244..5446	gap2	ATCEA4C93636_1	96	ATL8C17337:6207..5682	0.62					
150101	ATU012041	ATL8C2324:2173..1	gap2	ATCEA4C30685_1, ATCEA4C30685_3, ATCEA4S35234	96, 92, 83	ATL8C2324:2173..286	0.62					
150102	ATU012042	ATL8C7304:589..1023	gap2	ATCEA4C2590_1	96	ATL8C7304:830..1023	0.62					
150103	ATU012043	ATL8C37847:1144..179	gap2	ATCEA4C33357_1	96	ATL8C37847:978..179	0.62					
150104	ATU012044	ATL8C23028:541..1	gap2	ATCEA4C30890_1	96	ATL8C23028:513..14	0.62					
150105	ATU012045	ATL8C45668:1521..138	gap2	ATCEA4S3019	96	ATL8C45668:1521..138	0.62					
150106	ATU012	ATL8C2	gap2	ATCEA4	96, 88	ATL8C2	0.62					

	046	2095:2216..363		C13377_1, ATCEA4S8197		2095:363..2216						
150107	ATU012047	ATL8C17915:1953..1637	gap2	ATCEA4S1399	96	ATL8C17915:1953..1879	0.62					
150108	ATU012048	ATL8C1786:1..612	gap2	ATCEA4C9355_1	96	ATL8C1786:24..612	0.62					
150109	ATU012049	ATL8C9385:3558..57	gap2	ATCEA4C134554_1, ATCEA4C120678_1	95, 93	ATL8C9385:3501..57	0.62	g2583136, g4539341	100, 98	851, 191	1.0e-65, 5.3e-11	(AC002387) unknown protein [Arabidopsis thaliana]; (AL035539) putative protein [Arabidopsis thaliana]
150110	ATU012050	ATL8C47963:1..804	gap2	ATCEA4C1903_1, ATCEA4S29003, ATCEA4S13524	96, 94, 86	ATL8C47963:64..767	0.62					
150111	ATU012051	ATL8C20136:88..656	gap2	ATCEA4C22334_1	96	ATL8C20136:88..644	0.61					
150112	ATU012052	ATL8C21754:8	gap2	ATCEA4C5411_	96	ATL8C21754:2	0.61					

		2..126 1		1		09..12 61						
150113	ATU012 053	ATL8C3 5577:1 ..943	gap2	ATCEA4 C10205 6_1, ATCEA4 C98594 _1, ATCEA4 C98594 _2, ATCEA4 S25113	96, 91, 86, 85	ATL8C3 5577:3 21..65 1	0.61					
150114	ATU012 054	ATL8C5 504:16 79..39 56	gap2	ATCEA4 C72972 _1, ATCEA4 S30059	96, 95	ATL8C5 504:21 90..39 56	0.61					
150115	ATU012 055	ATL8S9 794:1. .672	gap2	ATCEA4 C43072 _1	96	ATL8S9 794:15 1..577	0.61					
150116	ATU012 056	ATL8C2 5744:1 959..1 6	gap2	ATCEA4 C17739 _1	96	ATL8C2 5744:1 959..1 6	0.61					
150117	ATU012 057	ATL8C1 0367:2 622..2 188	gap2	ATCEA4 S14975	96	ATL8C1 0367:2 607..2 301	0.61					
150118	ATU012 058	ATL8C2 589:27 9..702	gap2	ATCEA4 C21092 _1	96	ATL8C2 589:34 7..673	0.61					
150119	ATU012 059	ATL8C4 2284:1 930..4 544	gap2	ATCEA4 C11783 8_1	95	ATL8C4 2284:1 930..4 544	0.61	g47551 99	100	559	2.8e-60	(AC007 018) hypoth etical protei n [Arabi dopsis thalia na]
150120	ATU012 060	ATL8C3 4744:1	gap2	ATCEA4 C20293	96	ATL8C3 4744:1	0.61					

		514..65		_1		027..65						
150121	ATU012061	ATL8S9139:123..510	gap2	ATCEA4C44283_1	96	ATL8S9139:136..482	0.61					
150122	ATU012062	ATL8C38791:1109..1	gap2	ATCEA4C863_1	96	ATL8C38791:883..56	0.61					
150123	ATU012063	ATL8C21182:1532..615	gap2	ATCEA4C28818_2	96	ATL8C21182:1532..615	0.61					
150124	ATU012064	ATL8S5950:313..689	gap2	ATCEA4S2953	96	ATL8S5950:438..566	0.60					
150125	ATU012065	ATL8C37383:139..1409	gap2	ATCEA4S31881	96	ATL8C37383:139..1397	0.60					
150126	ATU012066	ATL8C43699:1..414	gap2	ATCEA4C23165_1, ATCEA4S9547	96, 86	ATL8C43699:134..217	0.60					
150127	ATU012067	ATL8C2343:82..1152	gap2	ATCEA4S29672	96	ATL8C2343:82..1152	0.60					
150128	ATU012068	ATL8C9901:87..1610	gap2	ATCEA4S557, ATCEA4C95111_1	96, 94	ATL8C9901:492..1610	0.60					
150129	ATU012069	ATL8C27829:776..316	gap2	ATCEA4C156_5, ATCEA4C49858_1	96, 93	ATL8C27829:776..316	0.60					
150130	ATU012070	ATL8C4163:3129..187	gap2	ATCEA4C25170_1, ATCEA4S32641	96, 93	ATL8C4163:3076..187	0.60					
150131	ATU012	ATL8C4	gap2	ATCEA4	96	ATL8C4	0.60					

	071	5693:706..5		C12242_1		5693:706..50						
150132	ATU012072	ATL8C27622:211..393	gap2	ATCEA4S7950	96	ATL8C27622:257..352	0.60					
150133	ATU012073	ATL8C6994:1191..47	gap2	ATCEA4S3451	96	ATL8C6994:1141..47	0.59					
150134	ATU012074	ATL8C42233:431..5	gap2	ATCEA4C20166_2, ATCEA4C20166_1	96, 89	ATL8C42233:370..182	0.59					
150135	ATU012075	ATL8C49868:1303..32	gap2	ATCEA4C5674_1	96	ATL8C49868:1210..32	0.59					
150136	ATU012076	ATL8C26566:176..772	gap2	ATCEA4S36258	96	ATL8C26566:179..664	0.59					
150137	ATU012077	ATL8C647:4217..1	gap2	ATCEA4S1752, ATCEA4C12866_1	96, 95	ATL8C647:4217..173	0.59					
150138	ATU012078	ATL8S24967:567..1	gap2	ATCEA4C299_1, ATCEA4S30749	96, 94	ATL8S24967:366..97	0.59					
150139	ATU012079	ATL8S16873:1..272	gap2	ATCEA4S30312	96	ATL8S16873:91..237	0.58					
150140	ATU012080	ATL8C25790:1307..372	gap2	ATCEA4C36891_1	96	ATL8C25790:1281..372	0.58					
150141	ATU012081	ATL8C35222:678..60	gap2	ATCEA4S6246	96	ATL8C35222:545..60	0.58					
150142	ATU012	ATL8C4	gap2	ATCEA4	96	ATL8C4	0.58					

	082	8511:750..1		C521_1		8511:750..19						
150143	ATU012083	ATL8C32916:2592..771	gap2	ATCEA4C54462_2, ATCEA4S34635, ATCEA4S12769	95, 86, 82	ATL8C32916:2592..828	0.58	g4455203	100	1030	7.2e-88	(AL035440) putative protein [Arabidopsis thaliana]
150144	ATU012084	ATL8C14377:2450..3636	gap2	ATCEA4C16842_1, ATCEA4S33146	95, 94	ATL8C14377:3477..2615	0.58	g3242723	100	600	1.1e-57	(AC003040) putative acetone-cyanohydrin lyase [Arabidopsis thaliana]
150145	ATU012085	ATL8C45071:75..5612	gap2	ATCEA4S179, ATCEA4S3937, ATCEA4S11082	95, 87, 86	ATL8C45071:75..5473	0.58	g4773919, g4773910	100, 47	2736, 175	2.6e-198, 2.6e-05	(AF147259) No definition line found [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis

												thaliana]
150146	ATU0120086	ATL8C4109:46..2119	gap2	ATCEA4C1726_2, ATCEA4C1726_1	96, 95	ATL8C4109:46..2090	0.58					
150147	ATU0120087	ATL8C29436:242..551	gap2	ATCEA4S473	96	ATL8C29436:349..551	0.58					
150148	ATU0120088	ATL8C40217:54..694	gap2	ATCEA4C485_1	96	ATL8C40217:188..614	0.57					
150149	ATU0120089	ATL8C36245:703..1044	gap2	ATCEA4S5351	96	ATL8C36245:970..1041	0.57					
150150	ATU0120090	ATL8C29118:220..1172	gap2	ATCEA4S35682	96	ATL8C29118:220..1116	0.57					
150151	ATU0120091	ATL8C30600:977..280	gap2	ATCEA4C7646_1, ATCEA4S11394	96, 89	ATL8C30600:834..280	0.57					
150152	ATU0120092	ATL8C382:1..3449	gap2	ATCEA4S1144, ATCEA4C26564_1	96, 86	ATL8C382:291..3449	0.57					
150153	ATU0120093	ATL8C747:361..701	gap2	ATCEA4C12979_1	96	ATL8C747:574..688	0.57					
150154	ATU0120094	ATL8C49747:8952..5808	gap2	ATCEA4C14132_1, ATCEA4C151128_1, ATCEA4	96, 94, 92	ATL8C49747:8952..5957	0.57					

				S35322								
150155	ATU012095	ATL8C38592:460..621	gap2	ATCEA4S1280	96	ATL8C38592:495..585	0.57					
150156	ATU012096	ATL8C49538:1..771	gap2	ATCEA4S9280, ATCEA4C4410_1, ATCEA4C4410_6	96, 96, 84	ATL8C49538:81..553	0.56					
150157	ATU012097	ATL8C48165:81..788	gap2	ATCEA4C120632_1	96	ATL8C48165:89..788	0.56					
150158	ATU012098	ATL8C27258:1195..737	gap2	ATCEA4S2589, ATCEA4S34425	96, 88	ATL8C27258:1140..737	0.56					
150159	ATU012099	ATL8C1764:483..918	gap2	ATCEA4S3016	96	ATL8C1764:600..720	0.56					
150160	ATU012100	ATL8C43441:1209..622	gap2	ATCEA4S17571	96	ATL8C43441:1011..622	0.56					
150161	ATU012101	ATL8C13205:1051..1	gap2	ATCEA4S17231, ATCEA4S35570	96, 92	ATL8C13205:1051..56	0.56					
150162	ATU012102	ATL8C5325:441..3872	gap2	ATCEA4C76536_1, ATCEA4C141945_1, ATCEA4S20229	95, 88, 83	ATL8C5325:839..2367	0.56	g4510347, g4583153	100, 33	1037, 82	3.4e-83, 0.10	(AC006921) hypothetical protein [Arabidopsis thaliana]; (AF108211)

												cytosolic inorganic pyrophosphatase [Homo sapiens]
150163	ATU0121103	ATL8C47664:571..1	gap2	ATCEA4S1761	96	ATL8C47664:571..91	0.56					
150164	ATU0121104	ATL8C20190:1288..495	gap2	ATCEA4S29940	96	ATL8C20190:1036..495	0.55					
150165	ATU0121105	ATL8C42884:331..759	gap2	ATCEA4S5585	96	ATL8C42884:529..759	0.55					
150166	ATU0121106	ATL8C565:962..1503	gap2	ATCEA4C8675_2, ATCEA4C8675_1	96, 91	ATL8C565:1422..1103	0.55					
150167	ATU0121107	ATL8C4863:1726..1	gap2	ATCEA4S26976, ATCEA4C90181_1	96, 91	ATL8C4863:1726..20	0.55					
150168	ATU0121108	ATL8C6960:554..25	gap2	ATCEA4C68239_1	96	ATL8C6960:524..25	0.55					
150169	ATU0121109	ATL8C19630:1469..446	gap2	ATCEA4C46129_1, ATCEA4S31820	96, 94	ATL8C19630:1469..446	0.55					
150170	ATU0121110	ATL8C26182:600..1	gap2	ATCEA4C1096_2,	96, 82	ATL8C26182:536..63	0.55					

				ATCEA4C18932_1								
150171	ATU012111	ATL8C32124:343..1171	gap2	ATCEA4S35300	95	ATL8C32124:343..988	0.55	g3164222	100	258	2.0e-28	(AB008518) RMA1 [Arabidopsis thaliana]
150172	ATU012112	ATL8C35788:78..512	gap2	ATCEA4C8348_1	96	ATL8C35788:78..275	0.54					
150173	ATU012113	ATL8C5081:989..199	gap2	ATCEA4C1879_1	96	ATL8C5081:788..399	0.54					
150174	ATU012114	ATL8C29108:4141..4721	gap2	ATCEA4C203_1	96	ATL8C29108:4176..4712	0.54					
150175	ATU012115	ATL8C5068:1298..27	gap2	ATCEA4C27709_1	96	ATL8C5068:1230..27	0.54					
150176	ATU012116	ATL8C36368:662..1	gap2	ATCEA4C118926_1	96	ATL8C36368:656..144	0.54					
150177	ATU012117	ATL8C9712:156..1181	gap2	ATCEA4S6021, ATCEA4C32806_1	96, 92	ATL8C9712:192..1005	0.54					
150178	ATU012118	ATL8C37395:694..1184	gap2	ATCEA4S30384	96	ATL8C37395:1184..694	0.54					
150179	ATU012119	ATL8C11252:879..482	gap2	ATCEA4C121497_1	96	ATL8C11252:821..482	0.54					
150180	ATU012120	ATL8C822:1..256	gap2	ATCEA4C101734_1	96	ATL8C822:141..204	0.54					
150181	ATU012	ATL8C1	gap2	ATCEA4	96	ATL8C1	0.53					

	121	2828:386..1444		C30916_1		2828:386..1217						
150182	ATU012122	ATL8C26274:1..1273	gap2	ATCEA4C2038_1	96	ATL8C26274:288..1273	0.53					
150183	ATU012123	ATL8C39809:1..649	gap2	ATCEA4S14385, ATCEA4S33591	96, 91	ATL8C39809:122..208	0.53					
150184	ATU012124	ATL8S7023:608..288	gap2	ATCEA4C329_1, ATCEA4S28196	96, 95	ATL8S7023:608..576	0.52					
150185	ATU012125	ATL8C35780:1038..1893	gap2	ATCEA4C28902_1, ATCEA4S19321	96, 85	ATL8C35780:1210..1857	0.52					
150186	ATU012126	ATL8S14693:569..217	gap2	ATCEA4C32093_1, ATCEA4S6848	96, 82	ATL8S14693:503..242	0.52					
150187	ATU012127	ATL8C2922:795..4	gap2	ATCEA4C27916_1	96	ATL8C2922:795..13	0.52					
150188	ATU012128	ATL8C31858:441..2611	gap2	ATCEA4S34354, ATCEA4S6851	96, 83	ATL8C31858:441..2611	0.52					
150189	ATU012129	ATL8C4101:1280..1	gap2	ATCEA4C2037_1	96	ATL8C4101:1256..20	0.52					
150190	ATU012130	ATL8C6753:2667..1044	gap2	ATCEA4C127535_1	96	ATL8C6753:2667..1044	0.51					
150191	ATU012131	ATL8C11567:8	gap2	ATCEA4S36356	96	ATL8C11567:8	0.51					

		1..466				1..466						
150192	ATU012132	ATL8C34293:42..1036	gap2	ATCEA4S33373, ATCEA4C84535_1, ATCEA4S26671, ATCEA4C84535_2, ATCEA4S27635	96, 92, 91, 91, 87	ATL8C34293:991..272	0.51					
150193	ATU012133	ATL8C35543:1221..14	gap2	ATCEA4C28229_1	96	ATL8C35543:1144..14	0.51					
150194	ATU012134	ATL8C15790:654..33	gap2	ATCEA4S4139, ATCEA4S35685	96, 91	ATL8C15790:654..121	0.51					
150195	ATU012135	ATL8C32732:721..1366	gap2	ATCEA4C5494_1, ATCEA4S17185, ATCEA4C5494_2	96, 89, 89	ATL8C32732:721..899	0.51					
150196	ATU012136	ATL8C21457:1..728	gap2	ATCEA4C1755_1, ATCEA4S33967, ATCEA4S35775, ATCEA4C1755_2,	96, 94, 93, 90, 88	ATL8C21457:87..385	0.51					

				ATCEA4S34653								
150197	ATU0121137	ATL8C11420:803..286	gap2	ATCEA4S23320	96	ATL8C11420:784..431	0.51					
150198	ATU0121138	ATL8S11502:337..642	gap2	ATCEA4S30924	96	ATL8S11502:340..498	0.51					
150199	ATU0121139	ATL8S30704:1..414	gap2	ATCEA4C26686_1	96	ATL8S30704:78..414	0.51					
150200	ATU0121140	ATL8C11775:555..104	gap2	ATCEA4C48254_1, ATCEA4C2666_2	96, 82	ATL8C11775:391..104	0.50					
150201	ATU0121141	ATL8C1846:1..720	gap2	ATCEA4S2523, ATCEA4S2793, ATCEA4C18775_1	96, 93, 85	ATL8C1846:162..720	0.50					
150202	ATU0121142	ATL8C15127:1858..1482	gap2	ATCEA4S6224	96	ATL8C15127:1673..1482	0.50					
150203	ATU0121143	ATL8S17897:1..616	gap2	ATCEA4C109788_1, ATCEA4S26327	96, 95	ATL8S17897:144..468	0.50					
150204	ATU0121144	ATL8C13454:613..1	gap2	ATCEA4S15281, ATCEA4S29927	96, 95	ATL8C13454:613..250	0.50					
150205	ATU0121145	ATL8C16538:38..592	gap2	ATCEA4C4491_7, ATCEA4	96, 85	ATL8C16538:53..321	0.49					

				S27664								
150206	ATU0121 46	ATL8C21522:603..1	gap2	ATCEA4C22409_1	96	ATL8C21522:603..50	0.49					
150207	ATU0121 47	ATL8C7983:332..848	gap2	ATCEA4S30565	96	ATL8C7983:848..332	0.49					
150208	ATU0121 48	ATL8C18471:1771..304	gap2	ATCEA4S8084	96	ATL8C18471:1393..304	0.49					
150209	ATU0121 49	ATL8C25184:389..1219	gap2	ATCEA4C81062_1, ATCEA4S22008	96, 93	ATL8C25184:632..932	0.49					
150210	ATU0121 50	ATL8C6651:534..827	gap2	ATCEA4C66246_1	96	ATL8C6651:627..814	0.49					
150211	ATU0121 51	ATL8S16601:1..543	gap2	ATCEA4S1658, ATCEA4S1349	96, 95	ATL8S16601:239..504	0.49					
150212	ATU0121 52	ATL8C10689:3442..159	gap2	ATCEA4C48092_1	96	ATL8C10689:3442..159	0.49					
150213	ATU0121 53	ATL8C30930:804..10	gap2	ATCEA4S3057	96	ATL8C30930:801..10	0.49					
150214	ATU0121 54	ATL8C19631:299..2306	gap2	ATCEA4C18795_1	96	ATL8C19631:299..2292	0.48					
150215	ATU0121 55	ATL8S17633:382..183	gap2	ATCEA4S6113	96	ATL8S17633:266..183	0.48					
150216	ATU0121 56	ATL8C34716:1407..1	gap2	ATCEA4S29698	96	ATL8C34716:1407..252	0.48					
150217	ATU0121 57	ATL8C2797:26	gap2	ATCEA4C7086	96	ATL8C2797:26	0.48					

		04..3314		1		04..3244						
150218	ATU0121158	ATL8C9601:918..24	gap2	ATCEA4C3587_1	96	ATL8C9601:918..228	0.48					
150219	ATU0121159	ATL8S30063:365..1	gap2	ATCEA4S6787	96	ATL8S30063:273..210	0.48					
150220	ATU0121160	ATL8C37213:11004..5	gap2	ATCEA4S3107, ATCEA4S2602, ATCEA4S11880, ATCEA4C11767_1, ATCEA4S11048, ATCEA4S5076	96, 96, 92, 90, 86, 84	ATL8C37213:824..68	0.48					
150221	ATU0121161	ATL8C40389:60..479	gap2	ATCEA4S30157	96	ATL8C40389:146..458	0.47					
150222	ATU0121162	ATL8C47180:11325..1	gap2	ATCEA4C98703_1, ATCEA4C6478_1, ATCEA4S18118	96, 96, 86	ATL8C47180:11320..176	0.47					
150223	ATU0121163	ATL8C15781:11674..1024	gap2	ATCEA4C43551_1, ATCEA4S4998	96, 93	ATL8C15781:11357..1115	0.47					
150224	ATU0121164	ATL8C27100:331..1	gap2	ATCEA4S1263	96	ATL8C27100:331..19	0.47					

						6						
150225	ATU012165	ATL8C47773:549..1527	gap2	ATCEA4C9299_1	96	ATL8C47773:1179..1332	0.47					
150226	ATU012166	ATL8S5929:226..55	gap2	ATCEA4C4896_1	96	ATL8S5929:219..55	0.47					
150227	ATU012167	ATL8C19695:9..1168	gap2	ATCEA4S5524	96	ATL8C19695:23..1168	0.46					
150228	ATU012168	ATL8C37124:247..1330	gap2	ATCEA4S11444	96	ATL8C37124:363..764	0.46					
150229	ATU012169	ATL8C41087:259..944	gap2	ATCEA4S1889	96	ATL8C41087:384..944	0.46					
150230	ATU012170	ATL8C29409:565..1	gap2	ATCEA4C26261_1	96	ATL8C29409:274..51	0.46					
150231	ATU012171	ATL8C32000:1..291	gap2	ATCEA4S3607	96	ATL8C32000:103..291	0.46					
150232	ATU012172	ATL8C10813:1..677	gap2	ATCEA4C1297_1	96	ATL8C10813:138..200	0.46					
150233	ATU012173	ATL8C12187:121..750	gap2	ATCEA4C1359_1, ATCEA4S10867, ATCEA4S8305	96, 88, 82	ATL8C12187:209..739	0.46					
150234	ATU012174	ATL8C15375:968..1	gap2	ATCEA4C67240_1	96	ATL8C15375:806..103	0.45					
150235	ATU012	ATL8C1	gap2	ATCEA4	96	ATL8C1	0.45					

	175	4273:135..630		S29980		4273:135..397						
150236	ATU012176	ATL8C19775:655..1	gap2	ATCEA4C116084_1	96	ATL8C19775:608..29	0.45					
150237	ATU012177	ATL8C34437:125..823	gap2	ATCEA4S2208	96	ATL8C34437:284..823	0.45					
150238	ATU012178	ATL8S30860:1..413	gap2	ATCEA4C54184_1, ATCEA4C54184_2	96, 92	ATL8S30860:182..393	0.45					
150239	ATU012179	ATL8C24926:1944..1	gap2	ATCEA4C52516_1, ATCEA4C66730_1	96, 89	ATL8C24926:1511..121	0.45					
150240	ATU012180	ATL8S6337:492..164	gap2	ATCEA4S370	96	ATL8S6337:266..164	0.45					
150241	ATU012181	ATL8C12788:570..1	gap2	ATCEA4C23259_1	96	ATL8C12788:152..40	0.44					
150242	ATU012182	ATL8C34288:1..689	gap2	ATCEA4C38002_1, ATCEA4S24576	96, 93	ATL8C34288:2..662	0.44					
150243	ATU012183	ATL8C20010:934..665	gap2	ATCEA4S35710, ATCEA4S16921	96, 93	ATL8C20010:934..722	0.43					
150244	ATU012184	ATL8C35683:4668..53	gap2	ATCEA4C22467_1, ATCEA4C34331_1,	96, 95, 93	ATL8C35683:4668..333	0.43					

				ATCEA4C10950_1								
150245	ATU012185	ATL8C30094:109..749	gap2	ATCEA4C32383_1	96	ATL8C30094:109..556	0.43					
150246	ATU012186	ATL8C45249:1277..574	gap2	ATCEA4C19686_1	96	ATL8C45249:1187..574	0.43					
150247	ATU012187	ATL8C38125:258..1332	gap2	ATCEA4C57576_1	96	ATL8C38125:258..1332	0.43					
150248	ATU012188	ATL8C46980:963..2121	gap2	ATCEA4C41920_1, ATCEA4C41920_2	96, 91	ATL8C46980:963..1506	0.43					
150249	ATU012189	ATL8C3461:337..748	gap2	ATCEA4C12243_4	96	ATL8C3461:403..625	0.43					
150250	ATU012190	ATL8C47212:442..96	gap2	ATCEA4S1104	96	ATL8C47212:334..96	0.43					
150251	ATU012191	ATL8C33905:1050..217	gap2	ATCEA4C28706_2, ATCEA4S34572	96, 91	ATL8C33905:997..217	0.43					
150252	ATU012192	ATL8S29401:479..134	gap2	ATCEA4S1885	96	ATL8S29401:479..134	0.43					
150253	ATU012193	ATL8C17132:439..97	gap2	ATCEA4S11250	96	ATL8C17132:269..97	0.43					
150254	ATU012194	ATL8S21063:1..400	gap2	ATCEA4C21582_1	96	ATL8S21063:29..340	0.42					
150255	ATU012195	ATL8C6011:23	gap2	ATCEA4C29325	96	ATL8C6011:23	0.42					

		2..161 6		_1		2..958						
150256	ATU012 196	ATL8C2 5875:5 70..12 73	gap2	ATCEA4 S2433	96	ATL8C2 5875:7 43..12 73	0.41					
150257	ATU012 197	ATL8C3 231:19 33..12 51	gap2	ATCEA4 C26908 _1	96	ATL8C3 231:19 33..13 86	0.41					
150258	ATU012 198	ATL8C3 7207:2 893..1 343	gap2	ATCEA4 C10016 6_1, ATCEA4 S17142	96, 95	ATL8C3 7207:2 759..1 343	0.40					
150259	ATU012 199	ATL8C1 9033:1 140..2 68	gap2	ATCEA4 S7261	96	ATL8C1 9033:7 84..26 8	0.40					
150260	ATU012 200	ATL8C2 9814:2 83..15 6	gap2	ATCEA4 S29873	96	ATL8C2 9814:2 67..15 6	0.40					
150261	ATU012 201	ATL8C4 8374:2 17..1	gap2	ATCEA4 C11862 4_1	96							
150262	ATU012 202	ATL8C9 112:1. .693	gap2	ATCEA4 C61927 _1	96							
150263	ATU012 203	ATL8C2 8730:1 ..153	gap2	ATCEA4 C31689 _1	96							
150264	ATU012 204	ATL8S5 087:12 1..477	gap2	ATCEA4 C24947 _1	96							
150265	ATU012 205	ATL8C4 8233:4 17..82	gap2	ATCEA4 S30758	96							
150266	ATU012 206	ATL8C1 2493:8 03..11 78	gap2	ATCEA4 C18045 _1	96							
150267	ATU012 207	ATL8S2 5963:1	gap2	ATCEA4 C999_1	96							

		16..568										
150268	ATU0122208	ATL8C48224:1669..1460	gap2	ATCEA4S3650	96							
150269	ATU0122209	ATL8S9888:258..489	gap2	ATCEA4C161071	96							
150270	ATU0122210	ATL8S9781:1..486	gap2	ATCEA4C203451	96							
150271	ATU0122211	ATL8C48177:307..482	gap2	ATCEA4S21626	96							
150272	ATU0122212	ATL8S9491:1..576	gap2	ATCEA4C128346 1	96							
150273	ATU0122213	ATL8S9373:1..357	gap2	ATCEA4S33407	96							
150274	ATU0122214	ATL8C24833:4108..142	gap2	ATCEA4S1952	95			g3914212	100	3473	0.0	5-OXOPROLINASE (5-OXO-L-PROLINASE) (PYROGLUTAMASE) (5-OPASE) [Rattus norvegicus]
150275	ATU0122215	ATL8S8842:618..542	gap2	ATCEA4S12406	96							
150276	ATU0122216	ATL8C33994:707..11	gap2	ATCEA4S26830	96							

		04										
150277	ATU012217	ATL8S8610:77..485	gap2	ATCEA4S30127	96							
150278	ATU012218	ATL8S851:1..125	gap2	ATCEA4S30105	96							
150279	ATU012219	ATL8S8000:79..1	gap2	ATCEA4S36216	96							
150280	ATU012220	ATL8S7891:186..397	gap2	ATCEA4C7976_1, ATCEA4S28334	96, 82							
150281	ATU012221	ATL8S7559:394..153	gap2	ATCEA4C85573_1	96							
150282	ATU012222	ATL8S7329:1..210	gap2	ATCEA4C46853_1	96							
150283	ATU012223	ATL8S73:489..252	gap2	ATCEA4S3428	96							
150284	ATU012224	ATL8S7145:251..530	gap2	ATCEA4C32491_1	96							
150285	ATU012225	ATL8S6785:183..94	gap2	ATCEA4S36264	96							
150286	ATU012226	ATL8C47892:4121..3763	gap2	ATCEA4S1535	96							
150287	ATU012227	ATL8S6738:181..96	gap2	ATCEA4S36264	96							
150288	ATU012228	ATL8C1361:1945..336	gap2	ATCEA4S14776, ATCEA4C27493_1, ATCEA4	96, 95, 94, 92							

				S27251, ATCEA4S26484								
150289	ATU0122229	ATL8S67:513..343	gap2	ATCEA4S4696	96							
150290	ATU0122230	ATL8S6429:310..57	gap2	ATCEA4C151858_1	96							
150291	ATU0122231	ATL8C47848:824..1240	gap2	ATCEA4C59410_1	96							
150292	ATU0122232	ATL8S6120:323..119	gap2	ATCEA4S10909	96							
150293	ATU0122233	ATL8S5813:20..375	gap2	ATCEA4S6175	96							
150294	ATU0122234	ATL8S5607:480..597	gap2	ATCEA4S21042	96							
150295	ATU0122235	ATL8S4759:136..470	gap2	ATCEA4S6126	96							
150296	ATU0122236	ATL8S4651:154..1	gap2	ATCEA4S13074	96							
150297	ATU0122237	ATL8S4437:361..31	gap2	ATCEA4S30957	96							
150298	ATU0122238	ATL8S4113:59..515	gap2	ATCEA4C27061_1	96							
150299	ATU0122239	ATL8C47493:380..1	gap2	ATCEA4S29204, ATCEA4S20898, ATCEA4C7372_18,	96, 93, 93, 90							

				ATCEA4C7372_6								
150300	ATU012240	ATL8S4011:379..613	gap2	ATCEA4S35863	96							
150301	ATU012241	ATL8S3918:258..1	gap2	ATCEA4C17225_2	96							
150302	ATU012242	ATL8C14691:296..1	gap2	ATCEA4S31261	96							
150303	ATU012243	ATL8S354:405..36	gap2	ATCEA4S14470	96							
150304	ATU012244	ATL8C47335:1..75	gap2	ATCEA4S1380	96							
150305	ATU012245	ATL8S12351:439..590	gap2	ATCEA4C24713_1	96							
150306	ATU012246	ATL8C12665:1713..2009	gap2	ATCEA4S30061	96							
150307	ATU012247	ATL8C47219:1..226	gap2	ATCEA4S36269	96							
150308	ATU012248	ATL8C47208:1283..1528	gap2	ATCEA4S29594	96							
150309	ATU012249	ATL8C34188:1419..1059	gap2	ATCEA4S30132	96							
150310	ATU012250	ATL8C47128:1457..1536	gap2	ATCEA4S7	96							
150311	ATU012251	ATL8S30755:1..297	gap2	ATCEA4S4010	96							

150312	ATU012252	ATL8S30754:656..297	gap2	ATCEA4S2752	96							
150313	ATU012253	ATL8S30514:1..388	gap2	ATCEA4C128_3, ATCEA4S24695, ATCEA4C128_1	96, 87, 83							
150314	ATU012254	ATL8S30486:7..376	gap2	ATCEA4S12603	96							
150315	ATU012255	ATL8C47032:688..796	gap2	ATCEA4S4989	96							
150316	ATU012256	ATL8C47026:1397..1761	gap2	ATCEA4C76999_1	96							
150317	ATU012257	ATL8C24166:1..1002	gap2	ATCEA4C17595_1, ATCEA4C17595_2	96, 95							
150318	ATU012258	ATL8S29971:1..97	gap2	ATCEA4S11695	96							
150319	ATU012259	ATL8C40644:447..1	gap2	ATCEA4S32857, ATCEA4C24443_1	96, 95							
150320	ATU012260	ATL8S29415:1..227	gap2	ATCEA4S12159	96							
150321	ATU012261	ATL8S28930:1..305	gap2	ATCEA4S1815	96							

150322	ATU0122262	ATL8S28825:261..1	gap2	ATCEA4C132104_1	96							
150323	ATU0122263	ATL8S28772:297..1	gap2	ATCEA4S13733	96							
150324	ATU0122264	ATL8C34209:1..182	gap2	ATCEA4S24219	96							
150325	ATU0122265	ATL8S30519:527..150	gap2	ATCEA4C7204_1	96							
150326	ATU0122266	ATL8C46873:663..1218	gap2	ATCEA4S25339	96							
150327	ATU0122267	ATL8C46800:1145..898	gap2	ATCEA4S115	96							
150328	ATU0122268	ATL8S27495:610..98	gap2	ATCEA4S6189	96							
150329	ATU0122269	ATL8C34249:938..676	gap2	ATCEA4S11014	96							
150330	ATU0122270	ATL8C14640:1..301	gap2	ATCEA4S25282,ATCEA4C78131_1	96, 93							
150331	ATU0122271	ATL8S25874:1..98	gap2	ATCEA4S5149	96							
150332	ATU0122272	ATL8C46663:1503..1001	gap2	ATCEA4S36359	96							
150333	ATU0122273	ATL8C46656:729..26	gap2	ATCEA4S10998	96							

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150334	ATU0122274	ATL8S25863:1..264	gap2	ATCEA4S2638	96							
150335	ATU0122275	ATL8S25482:472..604	gap2	ATCEA4S3992	96							
150336	ATU0122276	ATL8S247:120..426	gap2	ATCEA4C151099_1	96							
150337	ATU0122277	ATL8S24352:384..436	gap2	ATCEA4S6300	96							
150338	ATU0122278	ATL8S24271:445..520	gap2	ATCEA4S7413	96							
150339	ATU0122279	ATL8S23748:487..229	gap2	ATCEA4C11426_1	96							
150340	ATU0122280	ATL8S23543:279..463	gap2	ATCEA4S29590	96							
150341	ATU0122281	ATL8S23250:1..272	gap2	ATCEA4C14556_1	96							
150342	ATU0122282	ATL8C46312:355..1	gap2	ATCEA4S4396	96							
150343	ATU0122283	ATL8C46306:1190..728	gap2	ATCEA4C10671_2	96							
150344	ATU0122284	ATL8S23172:596..214	gap2	ATCEA4C28197_1	96							
150345	ATU0122285	ATL8S23054:416..61	gap2	ATCEA4S26107	96							

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150346	ATU0122286	ATL8C46247:447..813	gap2	ATCEA4S4056	96							
150347	ATU0122287	ATL8S22972:207..436	gap2	ATCEA4S4247	96							
150348	ATU0122288	ATL8S22802:490..617	gap2	ATCEA4S11634	96							
150349	ATU0122289	ATL8C46230:674..1139	gap2	ATCEA4S6583	96							
150350	ATU0122290	ATL8C12727:819..507	gap2	ATCEA4S26068	96							
150351	ATU0122291	ATL8C46049:119..1	gap2	ATCEA4S5827	96							
150352	ATU0122292	ATL8C17805:559..708	gap2	ATCEA4C1946_1	96							
150353	ATU0122293	ATL8C47535:1467..2112	gap2	ATCEA4S33969,ATCEA4S32360,ATCEA4S20601	96,91, 88							
150354	ATU0122294	ATL8C38644:899..393	gap2	ATCEA4S36300,ATCEA4C976_1	96, 95							
150355	ATU0122295	ATL8C27400:56..113	gap2	ATCEA4C27495_1	96							

150356	ATU0122296	ATL8S20228:1..390	gap2	ATCEA4S14566	96							
150357	ATU0122297	ATL8C45642:782..1056	gap2	ATCEA4S28205	96							
150358	ATU0122298	ATL8S19466:431..557	gap2	ATCEA4S32181	96							
150359	ATU0122299	ATL8C19364:1298..1493	gap2	ATCEA4S12742	96							
150360	ATU0122300	ATL8C44339:1..544	gap2	ATCEA4C23678_1, ATCEA4S34763	96, 93							
150361	ATU0122301	ATL8C14534:7832..7695	gap2	ATCEA4S253	96							
150362	ATU0122302	ATL8C45328:1582..1271	gap2	ATCEA4C118175_1	96							
150363	ATU0122303	ATL8C34575:477..728	gap2	ATCEA4S29788	96							
150364	ATU0122304	ATL8C47180:1534..1819	gap2	ATCEA4C91602_1	96							
150365	ATU0122305	ATL8C14509:478..323	gap2	ATCEA4S27431	96							
150366	ATU0122306	ATL8C45150:1..123	gap2	ATCEA4S908	96							
150367	ATU012	ATL8C4	gap2	ATCEA4	96							

	307	5097:2710..2313		C122723_1								
150368	ATU012308	ATL8C45093:1485..1820	gap2	ATCEA4S26353	96							
150369	ATU012309	ATL8C44177:1..882	gap2	ATCEA4S3203, ATCEA4C22899_1	96, 90							
150370	ATU012310	ATL8C29220:1..357	gap2	ATCEA4C720_1	96							
150371	ATU012311	ATL8C45023:620..715	gap2	ATCEA4S1353	96							
150372	ATU012312	ATL8C14362:4274..4665	gap2	ATCEA4C66239_1	96							
150373	ATU012313	ATL8C34680:349..1	gap2	ATCEA4S30285	96							
150374	ATU012314	ATL8C12754:1..127	gap2	ATCEA4S488	96							
150375	ATU012315	ATL8C14519:1734..2468	gap2	ATCEA4S29752, ATCEA4S7732, ATCEA4S24578	96, 93, 86							
150376	ATU012316	ATL8C34752:1619..1152	gap2	ATCEA4C34954_1	96							
150377	ATU012317	ATL8C34758:748..124	gap2	ATCEA4S6222	96							

150378	ATU012318	ATL8C44781:672..1027	gap2	ATCEA4C65003_1	96							
150379	ATU012319	ATL8C12935:667..477	gap2	ATCEA4C66462_1	96							
150380	ATU012320	ATL8C1455:578..818	gap2	ATCEA4C2249_2	96							
150381	ATU012321	ATL8C44682:130..1	gap2	ATCEA4C70921_1	96							
150382	ATU012322	ATL8C44603:518..735	gap2	ATCEA4S1036	96							
150383	ATU012323	ATL8C14590:936..506	gap2	ATCEA4S1171, ATCEA4S24353	96, 90							
150384	ATU012324	ATL8C33762:945..40	gap2	ATCEA4C35426_1	96							
150385	ATU012325	ATL8C44589:3637..3941	gap2	ATCEA4C80546_3	96							
150386	ATU012326	ATL8C43927:1..565	gap2	ATCEA4C312_1, ATCEA4C554_1	96, 82							
150387	ATU012327	ATL8C27521:582..1	gap2	ATCEA4C1876_1, ATCEA4C1876_2	96, 92							
150388	ATU012328	ATL8C34858:1..459	gap2	ATCEA4C42094_1	96							
150389	ATU012	ATL8C4	gap2	ATCEA4	96							

	329	4335:331..788		S25824								
150390	ATU0123330	ATL8C47434:101..552	gap2	ATCEA4S3199, ATCEA4C11630_1	96, 90							
150391	ATU0123331	ATL8C44179:3462..3611	gap2	ATCEA4S33980	96							
150392	ATU0123332	ATL8C4379:172..1	gap2	ATCEA4C102619_1	96							
150393	ATU0123333	ATL8C44099:2007..2086	gap2	ATCEA4S16687	96							
150394	ATU0123334	ATL8C1109:1482..1023	gap2	ATCEA4C8301_1	96							
150395	ATU0123335	ATL8C44047:3797..2277	gap2	ATCEA4S36253	96							
150396	ATU0123336	ATL8S13039:1..183	gap2	ATCEA4S29538, ATCEA4C2970_1	96, 84							
150397	ATU0123337	ATL8C45033:962..1366	gap2	ATCEA4C19023_1	96							
150398	ATU0123338	ATL8C43952:330..1	gap2	ATCEA4S234	96							
150399	ATU0123339	ATL8C18329:912..1420	gap2	ATCEA4C32458_1	96							

150400	ATU0123 40	ATL8C43435:2184..1781	gap2	ATCEA4C1869_1	96							
150401	ATU0123 41	ATL8C12782:1112..1426	gap2	ATCEA4S12190	96							
150402	ATU0123 42	ATL8C43681:1..196	gap2	ATCEA4C132179_1	96							
150403	ATU0123 43	ATL8S30054:401..201	gap2	ATCEA4C853_1, ATCEA4S30822	96, 83							
150404	ATU0123 44	ATL8C43849:286..608	gap2	ATCEA4S30066	96							
150405	ATU0123 45	ATL8C43828:84..207	gap2	ATCEA4S1187	96							
150406	ATU0123 46	ATL8C18463:474..1	gap2	ATCEA4C94261_1	96							
150407	ATU0123 47	ATL8C4372:561..1	gap2	ATCEA4C20755_1	96							
150408	ATU0123 48	ATL8C45106:887..1327	gap2	ATCEA4S24009, ATCEA4S28198	96, 96							
150409	ATU0123 49	ATL8C36864:1..60	gap2	ATCEA4C22327_1	96							
150410	ATU0123 50	ATL8C14079:263..618	gap2	ATCEA4S178	96							
150411	ATU0123 51	ATL8C3504:948..720	gap2	ATCEA4C6517_1	96							

150412	ATU012352	ATL8C43441:600..1213	gap2	ATCEA4C69893_1	96							
150413	ATU012353	ATL8C17646:614..2565	gap2	ATCEA4S3119	95			g4725955	100	199	3.1e-13	(AL049730) putative protein [Arabidopsis thaliana]
150414	ATU012354	ATL8C43280:5397..5095	gap2	ATCEA4S32326	96							
150415	ATU012355	ATL8C42993:270..1	gap2	ATCEA4S31338	96							
150416	ATU012356	ATL8C45195:1281..219	gap2	ATCEA4S4349	95			g4835239	100	669	4.5e-65	(AL049862) putative DNA-3-methyladenine glycosidase [Arabidopsis thaliana]
150417	ATU012357	ATL8C26566:787..176	gap2	ATCEA4C69_1	96							
150418	ATU012358	ATL8C42682:304..1	gap2	ATCEA4S14526	96							
150419	ATU012359	ATL8C42650:1	gap2	ATCEA4S26333	96							

		..161										
150420	ATU0123 60	ATL8C42624:1248..1456	gap2	ATCEA4C9534_1	96							
150421	ATU0123 61	ATL8C15127:1065..1620	gap2	ATCEA4C84619_1	96							
150422	ATU0123 62	ATL8C42589:1..258	gap2	ATCEA4S27317	96							
150423	ATU0123 63	ATL8C42435:127..490	gap2	ATCEA4C917_14, ATCEA4C917_8, ATCEA4S31958, ATCEA4S5882	96, 95, 94, 89							
150424	ATU0123 64	ATL8C42334:39..455	gap2	ATCEA4C128126_1	96							
150425	ATU0123 65	ATL8C42320:911..440	gap2	ATCEA4S33420	96							
150426	ATU0123 66	ATL8C13916:866..376	gap2	ATCEA4C14370_1	96							
150427	ATU0123 67	ATL8C42292:2499..2221	gap2	ATCEA4S127, ATCEA4S4070, ATCEA4S3527, ATCEA4S4766, ATCEA4S4592	96, 93, 86, 82, 82							

150428	ATU0123 68	ATL8S29832:588..394	gap2	ATCEA4C22539_1, ATCEA4S2366	96, 88							
150429	ATU0123 69	ATL8C42201:2296..2395	gap2	ATCEA4S2734	96							
150430	ATU0123 70	ATL8C45378:1..426	gap2	ATCEA4C7659_1, ATCEA4C7659_3	96, 85							
150431	ATU0123 71	ATL8C42172:162..524	gap2	ATCEA4S13818	96							
150432	ATU0123 72	ATL8C35142:836..898	gap2	ATCEA4S26143	96							
150433	ATU0123 73	ATL8C4533:372..1	gap2	ATCEA4C92425_1, ATCEA4C92425_2	96, 94							
150434	ATU0123 74	ATL8C42132:2077..387	gap2	ATCEA4C11627_1	96							
150435	ATU0123 75	ATL8C35151:112..372	gap2	ATCEA4S2210	96							
150436	ATU0123 76	ATL8C35155:534..842	gap2	ATCEA4S13869	96							
150437	ATU0123 77	ATL8C43669:452..64	gap2	ATCEA4C4473_1	96							

150438	ATU012378	ATL8C43201:574..344	gap2	ATCEA4C27528_1	96							
150439	ATU012379	ATL8C12828:108..409	gap2	ATCEA4S2898	96							
150440	ATU012380	ATL8C41756:11064..11838	gap2	ATCEA4C22604_1	96							
150441	ATU012381	ATL8C49079:682..564	gap2	ATCEA4C953_1	96							
150442	ATU012382	ATL8C15416:489..1001	gap2	ATCEA4S11764, ATCEA4C40447_1, ATCEA4S35719	96, 92, 91							
150443	ATU012383	ATL8C41623:470..122	gap2	ATCEA4S32324	96							
150444	ATU012384	ATL8C41610:971..1224	gap2	ATCEA4S12149	96							
150445	ATU012385	ATL8C41593:211..1	gap2	ATCEA4C40284_1	96							
150446	ATU012386	ATL8C8887:461..1	gap2	ATCEA4C246_1	96							
150447	ATU012387	ATL8C3528:98..1	gap2	ATCEA4S34188	96							
150448	ATU012388	ATL8C41487:1581..1	gap2	ATCEA4S30204	96							

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150449	ATU012389	ATL8C41449:2842..3213	gap2	ATCEA4S4560	96							
150450	ATU012390	ATL8C3528:925..375	gap2	ATCEA4S36062	96							
150451	ATU012391	ATL8C13661:308..1	gap2	ATCEA4C34762_1	96							
150452	ATU012392	ATL8C24485:256..623	gap2	ATCEA4S33796, ATCEA4S19144	96, 84							
150453	ATU012393	ATL8C41332:655..208	gap2	ATCEA4S7824	96							
150454	ATU012394	ATL8C41273:206..1	gap2	ATCEA4S25094	96							
150455	ATU012395	ATL8C35329:1310..1121	gap2	ATCEA4C119790_1	96							
150456	ATU012396	ATL8C35330:813..871	gap2	ATCEA4C5965_1	96							
150457	ATU012397	ATL8C4106:529..1277	gap2	ATCEA4C44863_1	96							
150458	ATU012398	ATL8C41052:2823..2686	gap2	ATCEA4S27369	96							
150459	ATU012399	ATL8C41046:1356..1460	gap2	ATCEA4C85152_1	96							
150460	ATU012	ATL8C4	gap2	ATCEA4	96, 83							

	400	7234:994..1124		C86265_1, ATCEA4S25954								
150461	ATU012401	ATL8C40889:32..424	gap2	ATCEA4S27173	96							
150462	ATU012402	ATL8C40778:618..188	gap2	ATCEA4S36334	96							
150463	ATU012403	ATL8C45716:938..1340	gap2	ATCEA4S14394, ATCEA4S16858	96, 94							
150464	ATU012404	ATL8C40686:154..45	gap2	ATCEA4S35726	96							
150465	ATU012405	ATL8C15747:970..1205	gap2	ATCEA4C70736_1, ATCEA4S27467	96, 95							
150466	ATU012406	ATL8C4060:1..265	gap2	ATCEA4S11752	96							
150467	ATU012407	ATL8C24536:550..81	gap2	ATCEA4C9356_1	96							
150468	ATU012408	ATL8C13544:1774..1637	gap2	ATCEA4S253	96							
150469	ATU012409	ATL8C40388:463..640	gap2	ATCEA4C8601_1	96							
150470	ATU012410	ATL8C40316:234..614	gap2	ATCEA4S1549	96							
150471	ATU012411	ATL8C40278:1	gap2	ATCEA4S28961	96							

		..540										
150472	ATU012412	ATL8C40250:704..1076	gap2	ATCEA4C27236_1	96							
150473	ATU012413	ATL8C24553:1..408	gap2	ATCEA4C66843_1	96							
150474	ATU012414	ATL8C40206:962..1134	gap2	ATCEA4C87416_1	96							
150475	ATU012415	ATL8C27009:1..181	gap2	ATCEA4S33152, ATCEA4C89286_1	96, 92							
150476	ATU012416	ATL8C40132:1714..1802	gap2	ATCEA4S7286	96							
150477	ATU012417	ATL8C24567:423..591	gap2	ATCEA4C7414_1, ATCEA4S13301	96, 90							
150478	ATU012418	ATL8C17447:336..547	gap2	ATCEA4C35414_2, ATCEA4S24793	96, 82							
150479	ATU012419	ATL8C39942:347..810	gap2	ATCEA4C20265_1	96							
150480	ATU012420	ATL8C35526:748..1208	gap2	ATCEA4S23942	96							
150481	ATU012421	ATL8C49372:589..318	gap2	ATCEA4C1808_2	96							

150482	ATU012422	ATL8C39826:2358..2670	gap2	ATCEA4S30484	96							
150483	ATU012423	ATL8C13447:2203..2045	gap2	ATCEA4S36164	96							
150484	ATU012424	ATL8C42439:422..835	gap2	ATCEA4C18881_1	96							
150485	ATU012425	ATL8C39663:836..756	gap2	ATCEA4S3937	96							
150486	ATU012426	ATL8C34269:1049..473	gap2	ATCEA4C8343_1, ATCEA4S1828, ATCEA4S7430	96, 94, 82							
150487	ATU012427	ATL8C4608:719..378	gap2	ATCEA4C1525_1, ATCEA4S9555	96, 85							
150488	ATU012428	ATL8C39526:678..485	gap2	ATCEA4S26612	96							
150489	ATU012429	ATL8C39411:527..749	gap2	ATCEA4S31873	96							
150490	ATU012430	ATL8C3939:740..836	gap2	ATCEA4S32556	96							
150491	ATU012431	ATL8C39327:3613..3742	gap2	ATCEA4S27044	96							
150492	ATU012	ATL8C3	gap2	ATCEA4	96							

	432	9327:1..156		S10987								
150493	ATU012433	ATL8C39276:87..293	gap2	ATCEA4C512_1	96							
150494	ATU012434	ATL8C13359:1..322	gap2	ATCEA4S5643	96							
150495	ATU012435	ATL8C46142:114..1	gap2	ATCEA4C40639_1	96							
150496	ATU012436	ATL8C3906:1..133	gap2	ATCEA4S12234	96							
150497	ATU012437	ATL8S29339:331..514	gap2	ATCEA4C18327_1	96							
150498	ATU012438	ATL8C4116:250..1116	gap2	ATCEA4C5990_2, ATCEA4C5990_1, ATCEA4S13238, ATCEA4S9973	96, 91, 86, 84							
150499	ATU012439	ATL8C38925:554..815	gap2	ATCEA4S30267	96							
150500	ATU012440	ATL8C12085:867..87	gap2	ATCEA4C20166_1, ATCEA4C20166_2, ATCEA4C13759_1, ATCEA4S34977	96, 91, 89, 84							

150501	ATU012441	ATL8C26938:690..877	gap2	ATCEA4C19122_1	96							
150502	ATU012442	ATL8C42200:1154..1476	gap2	ATCEA4C9297_1	96							
150503	ATU012443	ATL8C38794:1..436	gap2	ATCEA4C121905_1	96							
150504	ATU012444	ATL8C1634:4632..5495	gap2	ATCEA4C7547_1, ATCEA4S32378	96, 85							
150505	ATU012445	ATL8S9344:163..1	gap2	ATCEA4C120279_1	96							
150506	ATU012446	ATL8C38699:594..1469	gap2	ATCEA4C35862_1	96							
150507	ATU012447	ATL8C38690:861..406	gap2	ATCEA4S36363	96							
150508	ATU012448	ATL8C38610:1720..1472	gap2	ATCEA4S33530	96							
150509	ATU012449	ATL8C1639:2205..1430	gap2	ATCEA4C3699_1	96							
150510	ATU012450	ATL8C17345:3390..2760	gap2	ATCEA4S30020, ATCEA4S34907, ATCEA4C27631_1	96, 90, 88							

150511	ATU012451	ATL8C11102:504..77	gap2	ATCEA4C16892_1	96							
150512	ATU012452	ATL8C38345:372..810	gap2	ATCEA4S5772	96							
150513	ATU012453	ATL8C16473:663..927	gap2	ATCEA4C18874_1, ATCEA4S3299	96, 87							
150514	ATU012454	ATL8C38195:334..1	gap2	ATCEA4S32318	96							
150515	ATU012455	ATL8C25323:600..684	gap2	ATCEA4C13261_1	96							
150516	ATU012456	ATL8C38176:1084..680	gap2	ATCEA4C87294_1	96							
150517	ATU012457	ATL8C38131:1146..1027	gap2	ATCEA4S1057	96							
150518	ATU012458	ATL8C38129:550..130	gap2	ATCEA4C92444_1	96							
150519	ATU012459	ATL8C35838:424..332	gap2	ATCEA4S32163	96							
150520	ATU012460	ATL8C38061:1764..1390	gap2	ATCEA4S26424	96							
150521	ATU012461	ATL8C12923:917..1022	gap2	ATCEA4S12980	96							
150522	ATU012	ATL8C3	gap2	ATCEA4	96							

	462	8045:1201..863		S6366								
150523	ATU012463	ATL8S15247:295..409	gap2	ATCEA4C14929_1	96							
150524	ATU012464	ATL8C16571:929..1118	gap2	ATCEA4S34661, ATCEA4S32125, ATCEA4S15407	96, 85, 83							
150525	ATU012465	ATL8C41222:446..125	gap2	ATCEA4C73607_1	96							
150526	ATU012466	ATL8C16620:4499..3961	gap2	ATCEA4S31732	95			g4100433	100	324	1.1e-16	(AF000378) beta-glucosidase [Glycine max]
150527	ATU012467	ATL8C12930:1259..1135	gap2	ATCEA4C70801_1	96							
150528	ATU012468	ATL8C3590:569..665	gap2	ATCEA4S12809	96							
150529	ATU012469	ATL8C37754:280..1	gap2	ATCEA4C122126_1	96							
150530	ATU012470	ATL8C13151:1632..2088	gap2	ATCEA4C5175_1	96							
150531	ATU012471	ATL8C37715:1307..3	gap2	ATCEA4C10826_1	96							

		09										
150532	ATU012472	ATL8C1668:1..877	gap2	ATCEA4C102274_2, ATCEA4C102274_1, ATCEA4S25225, ATCEA4S32882	96, 93, 87, 83							
150533	ATU012473	ATL8S27909:1..235	gap2	ATCEA4C100362_1	96							
150534	ATU012474	ATL8C41245:1436..1189	gap2	ATCEA4C75282_1, ATCEA4S13863	96, 89							
150535	ATU012475	ATL8C16693:257..1431	gap2	ATCEA4S23096, ATCEA4S1396	95, 82			g2501578	100	1490	3.3e-145	ETHYLENE-INDUCIBLE PROTEIN HEVER [Hevea brasiliensis]
150536	ATU012476	ATL8C37606:426..702	gap2	ATCEA4C30766_1	96							
150537	ATU012477	ATL8C3760:647..437	gap2	ATCEA4S2874	96							
150538	ATU012478	ATL8C37549:265..719	gap2	ATCEA4S16208	96							
150539	ATU012479	ATL8C13137:1	gap2	ATCEA4S17015	96							

		092..662										
150540	ATU012480	ATL8C4186:3029..3474	gap2	ATCEA4S29941, ATCEA4S30342	96, 94							
150541	ATU012481	ATL8C2709:1..286	gap2	ATCEA4C48855_1	96							
150542	ATU012482	ATL8C47118:1..622	gap2	ATCEA4C7461_3, ATCEA4C7461_1	96, 86							
150543	ATU012483	ATL8C37525:1..198	gap2	ATCEA4C63916_1	96							
150544	ATU012484	ATL8C36047:776..404	gap2	ATCEA4C72933_1	96							
150545	ATU012485	ATL8C16804:1285..215	gap2	ATCEA4S2796, ATCEA4C158286_1	95, 89			g11698 63	100	501	2.5e-39	G-BOX BINDING FACTOR 4 [Arabidopsis thaliana]
150546	ATU012486	ATL8C36093:1..323	gap2	ATCEA4C76240_2	96							
150547	ATU012487	ATL8S4368:291..544	gap2	ATCEA4C9321_2	96							
150548	ATU012488	ATL8C37188:1373..1230	gap2	ATCEA4C19566_1	96							
150549	ATU012489	ATL8C37186:3	gap2	ATCEA4S3048	96							

		18..733										
150550	ATU0124 90	ATL8C37167:453..216	gap2	ATCEA4C130806_1	96							
150551	ATU0124 91	ATL8C3713:1510..1131	gap2	ATCEA4C130702_1	96							
150552	ATU0124 92	ATL8S12979:1..106	gap2	ATCEA4S17945, ATCEA4C34649_1	96, 85							
150553	ATU0124 93	ATL8C37119:843..1	gap2	ATCEA4C32718_1	96							
150554	ATU0124 94	ATL8C16946:4935..5100	gap2	ATCEA4C318_1, ATCEA4C318_2	96, 96							
150555	ATU0124 95	ATL8C36922:71..512	gap2	ATCEA4C28783_1	96							
150556	ATU0124 96	ATL8C4145:1..439	gap2	ATCEA4C378_1	96							
150557	ATU0124 97	ATL8C45858:388..654	gap2	ATCEA4C94252_2, ATCEA4S21287	96, 88							
150558	ATU0124 98	ATL8C36157:147..407	gap2	ATCEA4S3623	96							
150559	ATU0124 99	ATL8C13010:1330..1184	gap2	ATCEA4C17687_1	96							
150560	ATU012	ATL8C3	gap2	ATCEA4	96							

	500	6753:75..232		S27414								
150561	ATU012501	ATL8C9493:63..1	gap2	ATCEA4C28971_1	96							
150562	ATU012502	ATL8C36683:152..60	gap2	ATCEA4C9038_1	96							
150563	ATU012503	ATL8C36637:6243..6408	gap2	ATCEA4S11028	96							
150564	ATU012504	ATL8C13004:339..962	gap2	ATCEA4S30308	96							
150565	ATU012505	ATL8S18855:198..1	gap2	ATCEA4C113709_1	96							
150566	ATU012506	ATL8C17172:1185..679	gap2	ATCEA4C11177_1, ATCEA4S24824	96, 92							
150567	ATU012507	ATL8C36324:402..1	gap2	ATCEA4S6605	96							
150568	ATU012508	ATL8C42151:3156..3718	gap2	ATCEA4C6802_1	96							
150569	ATU012509	ATL8C36223:305..686	gap2	ATCEA4C79172_1	96							
150570	ATU012510	ATL8C36265:1159..973	gap2	ATCEA4S10357	96							
150571	ATU012511	ATL8C28060:128..554	gap2	ATCEA4C110790_1, ATCEA4S26417	96, 83							

150572	ATU012512	ATL8C31751:1..359	gap2	ATCEA4S8469	96							
150573	ATU012513	ATL8C31611:1..233	gap2	ATCEA4C132799_1	96							
150574	ATU012514	ATL8C31607:352..532	gap2	ATCEA4S30323	96							
150575	ATU012515	ATL8C31549:1..78	gap2	ATCEA4S2492	96							
150576	ATU012516	ATL8C31547:99..1	gap2	ATCEA4S36331	96							
150577	ATU012517	ATL8C315:1247..1030	gap2	ATCEA4S12319	96							
150578	ATU012518	ATL8S3109:1..249	gap2	ATCEA4C6655_2	96							
150579	ATU012519	ATL8C31374:501..417	gap2	ATCEA4S4243	96							
150580	ATU012520	ATL8C31318:375..55	gap2	ATCEA4C30318_1	96							
150581	ATU012521	ATL8C1232:11065..10492	gap2	ATCEA4C4712_1	96							
150582	ATU012522	ATL8C18832:2489..1161	gap2	ATCEA4C129632_1, ATCEA4C120644_1	96, 94							
150583	ATU012523	ATL8C31114:239..671	gap2	ATCEA4C34409_1	96							

150584	ATU012524	ATL8S19781:347..1	gap2	ATCEA4S33598, ATCEA4S36058	96, 95							
150585	ATU012525	ATL8C20015:1..136	gap2	ATCEA4C706_1	96							
150586	ATU012526	ATL8C48520:1..265	gap2	ATCEA4C33416_1	96							
150587	ATU012527	ATL8C30806:99..1	gap2	ATCEA4S30284	96							
150588	ATU012528	ATL8C30798:525..818	gap2	ATCEA4S4040	96							
150589	ATU012529	ATL8C19006:290..982	gap2	ATCEA4S30347, ATCEA4C4803_1	96, 88							
150590	ATU012530	ATL8C19073:201..310	gap2	ATCEA4C27740_1	96							
150591	ATU012531	ATL8S6439:717..819	gap2	ATCEA4C345_1	96							
150592	ATU012532	ATL8C30519:2856..2113	gap2	ATCEA4S36173	96							
150593	ATU012533	ATL8C16286:344..1	gap2	ATCEA4C14385_1	96							
150594	ATU012534	ATL8C30164:201..524	gap2	ATCEA4S13322	96							
150595	ATU012535	ATL8C30151:6	gap2	ATCEA4S28977	96							

		40..1										
150596	ATU012536	ATL8C2587:1..477	gap2	ATCEA4C12243_1, ATCEA4S35200, ATCEA4S30794	96, 92, 87							
150597	ATU012537	ATL8C48711:1466..1229	gap2	ATCEA4C43753_1, ATCEA4S9456	96, 84							
150598	ATU012538	ATL8C30032:1008..1908	gap2	ATCEA4C3911_1	96							
150599	ATU012539	ATL8C30029:1024..1080	gap2	ATCEA4S26626	96							
150600	ATU012540	ATL8S30575:563..1	gap2	ATCEA4C1950_1	96							
150601	ATU012541	ATL8C19249:955..732	gap2	ATCEA4C75813_1	96							
150602	ATU012542	ATL8C25008:301..1539	gap2	ATCEA4S34046, ATCEA4C14082_1	95, 92			g2832643	100	1228	1.3e-117	(AL021710) hypothetical protein [Arabidopsis thaliana]
150603	ATU012543	ATL8C29883:534..725	gap2	ATCEA4S2236	96							
150604	ATU012	ATL8C2	gap2	ATCEA4	96, 93							

	544	841:2582..2058		S35155, ATCEA4S28152								
150605	ATU012545	ATL8S4921:1..649	gap2	ATCEA4C119691_1	96							
150606	ATU012546	ATL8C1926:808..752	gap2	ATCEA4C22353_1	96							
150607	ATU012547	ATL8C29757:1492..1174	gap2	ATCEA4C107554_1	96							
150608	ATU012548	ATL8C28428:604..1	gap2	ATCEA4C6459_1	96							
150609	ATU012549	ATL8C29676:3666..3878	gap2	ATCEA4S2189	96							
150610	ATU012550	ATL8C29463:1..353	gap2	ATCEA4C4074_2	96							
150611	ATU012551	ATL8C12106:2465..2671	gap2	ATCEA4S31847	96							
150612	ATU012552	ATL8C12062:208..444	gap2	ATCEA4S29522	96							
150613	ATU012553	ATL8C6287:325..1	gap2	ATCEA4C38040_1	96							
150614	ATU012554	ATL8C290:1681..1889	gap2	ATCEA4S31224	96							
150615	ATU012555	ATL8C28973:904..1601	gap2	ATCEA4C7676_1	96							
150616	ATU012	ATL8C2	gap2	ATCEA4	96							

	556	8969:1077..777		S29567								
150617	ATU012557	ATL8C392:1895..1537	gap2	ATCEA4S29470	96							
150618	ATU012558	ATL8C27319:1491..2057	gap2	ATCEA4S27423, ATCEA4S19549	96, 84							
150619	ATU012559	ATL8C28725:485..628	gap2	ATCEA4S12501	96							
150620	ATU012560	ATL8C28498:538..764	gap2	ATCEA4C15867_1	96							
150621	ATU012561	ATL8C28494:1..95	gap2	ATCEA4C149779_1	96							
150622	ATU012562	ATL8C28489:749..1146	gap2	ATCEA4C2714_1	96							
150623	ATU012563	ATL8C28446:590..964	gap2	ATCEA4C56918_1	96							
150624	ATU012564	ATL8C19712:92..570	gap2	ATCEA4C427_1, ATCEA4S13644	96, 86							
150625	ATU012565	ATL8S4958:1..211	gap2	ATCEA4C55486_1	96							
150626	ATU012566	ATL8C28092:129..1	gap2	ATCEA4S23833	96							
150627	ATU012567	ATL8C19807:5	gap2	ATCEA4S28498	96, 86							

		03..1		, ATCEA4 S32536								
150628	ATU012 568	ATL8C3 8988:1 487..8 28	gap2	ATCEA4 C28798 _1, ATCEA4 C15451 3_1	96, 92							
150629	ATU012 569	ATL8C2 7830:7 04..36 5	gap2	ATCEA4 S4186	96							
150630	ATU012 570	ATL8C2 7774:4 17..26 6	gap2	ATCEA4 S2160	96							
150631	ATU012 571	ATL8C1 1834:1 340..1 559	gap2	ATCEA4 S5088	96							
150632	ATU012 572	ATL8C2 7734:5 08..24	gap2	ATCEA4 S6453	96							
150633	ATU012 573	ATL8C4 4200:1 029..1 337	gap2	ATCEA4 C26934 _1, ATCEA4 S30062	96, 85							
150634	ATU012 574	ATL8C2 7664:1 ..223	gap2	ATCEA4 C11796 7_1	96							
150635	ATU012 575	ATL8C2 7592:8 920..9 081	gap2	ATCEA4 S13943	96							
150636	ATU012 576	ATL8C1 1809:1 415..1 064	gap2	ATCEA4 C14288 _1	96							
150637	ATU012 577	ATL8C2 3389:1 ..86	gap2	ATCEA4 C1631_ 1, ATCEA4	96, 94, 94, 90							

				S34097, ATCEA4 S32021, ATCEA4 S18762								
150638	ATU012578	ATL8C27357:900..1285	gap2	ATCEA4 S11856	96							
150639	ATU012579	ATL8C27202:1..150	gap2	ATCEA4 S13042	96							
150640	ATU012580	ATL8C27201:214..610	gap2	ATCEA4 C51287_1	96							
150641	ATU012581	ATL8S25150:1..127	gap2	ATCEA4 S24131, ATCEA4 C28494_2	96, 91							
150642	ATU012582	ATL8C27080:1442..1225	gap2	ATCEA4 S977	96							
150643	ATU012583	ATL8C27038:331..787	gap2	ATCEA4 C101459_2, ATCEA4 C101459_3	96, 95							
150644	ATU012584	ATL8C26941:1..574	gap2	ATCEA4 C4929_1	96							
150645	ATU012585	ATL8S26045:1..590	gap2	ATCEA4 S4725, ATCEA4 C42344_1, ATCEA4 S19188	96, 96, 82							

150646	ATU012586	ATL8C26816:705..850	gap2	ATCEA4S30351	96							
150647	ATU012587	ATL8C20202:372..1399	gap2	ATCEA4C5912_2, ATCEA4C5912_7	95, 88			g4914459	100	965	5.3e-91	(AL050400) hypothetical protein [Arabidopsis thaliana]
150648	ATU012588	ATL8C26790:1328..1105	gap2	ATCEA4S4699	96							
150649	ATU012589	ATL8C11756:694..390	gap2	ATCEA4S34720	96							
150650	ATU012590	ATL8C26717:1..303	gap2	ATCEA4C38545_1	96							
150651	ATU012591	ATL8S24982:388..448	gap2	ATCEA4C13230_1	96							
150652	ATU012592	ATL8C26608:1028..1316	gap2	ATCEA4C50274_1	96							
150653	ATU012593	ATL8C37568:252..199	gap2	ATCEA4C7499_1	96							
150654	ATU012594	ATL8C26518:968..1780	gap2	ATCEA4C29970_1	96							
150655	ATU012595	ATL8S9536:382..1	gap2	ATCEA4C8307_1	96							

150656	ATU012596	ATL8C20343:892..198	gap2	ATCEA4S7778, ATCEA4C54779_1	96, 95							
150657	ATU012597	ATL8C20355:776..293	gap2	ATCEA4C117905_1	96							
150658	ATU012598	ATL8C49378:288..1	gap2	ATCEA4C19480_1, ATCEA4S3335, ATCEA4S3197	96, 95, 93							
150659	ATU012599	ATL8C25144:347..970	gap2	ATCEA4C7781_1	95			g3785990	100	632	2.3e-60	(AC005560) hypothetical protein [Arabidopsis thaliana]
150660	ATU012600	ATL8S20420:635..371	gap2	ATCEA4C105861_1	96							
150661	ATU012601	ATL8C26228:55..1	gap2	ATCEA4S3962	96							
150662	ATU012602	ATL8C2620:691..1359	gap2	ATCEA4S2774	96							
150663	ATU012603	ATL8C26197:820..1169	gap2	ATCEA4S29678	96							
150664	ATU012604	ATL8C4200:597..1	gap2	ATCEA4S606, ATCEA4	96, 82							

				C1985_1								
150665	ATU0126605	ATL8C2595:1..113	gap2	ATCEA4C16912_1	96							
150666	ATU0126606	ATL8C25895:1..341	gap2	ATCEA4S10675	96							
150667	ATU0126607	ATL8C25855:245..1	gap2	ATCEA4C116668_1	96							
150668	ATU0126608	ATL8C25826:1116..428	gap2	ATCEA4C127619_1	96							
150669	ATU0126609	ATL8C25811:198..1	gap2	ATCEA4C17977_1	96							
150670	ATU0126610	ATL8C4688:219..808	gap2	ATCEA4C852_1	96							
150671	ATU0126611	ATL8C25705:1366..1123	gap2	ATCEA4S30686	96							
150672	ATU0126612	ATL8C25697:1252..878	gap2	ATCEA4C68881_1	96							
150673	ATU0126613	ATL8C25678:1297..901	gap2	ATCEA4S239	96							
150674	ATU0126614	ATL8C28627:424..736	gap2	ATCEA4S35092, ATCEA4C23441_1, ATCEA4S13778, ATCEA4S26694	96, 96, 95, 92, 89, 85							

				, ATCEA4 S27450 , ATCEA4 S27047								
150675	ATU012 615	ATL8C2 5657:7 18..94 9	gap2	ATCEA4 S12868	96							
150676	ATU012 616	ATL8C3 7514:1 ..417	gap2	ATCEA4 C73970 _1	96							
150677	ATU012 617	ATL8C2 5555:1 02..1	gap2	ATCEA4 S12126	96							
150678	ATU012 618	ATL8C2 5502:1 86..45 4	gap2	ATCEA4 S3187	96							
150679	ATU012 619	ATL8C2 5470:1 757..1 372	gap2	ATCEA4 S25976	96							
150680	ATU012 620	ATL8C2 5402:5 52..24 9	gap2	ATCEA4 S11818	96							
150681	ATU012 621	ATL8C4 9538:1 415..2 309	gap2	ATCEA4 C29289 _1, ATCEA4 S5971, ATCEA4 S9205	96, 89, 85							
150682	ATU012 622	ATL8C2 5360:5 49..74 0	gap2	ATCEA4 C8449_ 1	96							
150683	ATU012 623	ATL8C2 5342:6 74..27 0	gap2	ATCEA4 S868	96							
150684	ATU012	ATL8C4	gap2	ATCEA4	96							

	624	954:1..503		C7638_1								
150685	ATU012625	ATL8C38282:1..784	gap2	ATCEA4C7743_1	96							
150686	ATU012626	ATL8C38263:132..66	gap2	ATCEA4C17852_1, ATCEA4C17852_2	96, 90							
150687	ATU012627	ATL8C38261:95..370	gap2	ATCEA4S35109, ATCEA4C1666_1	96, 96							
150688	ATU012628	ATL8C25139:71..387	gap2	ATCEA4S32973, ATCEA4S16842	96, 94							
150689	ATU012629	ATL8C2513:124..1	gap2	ATCEA4S31231	96							
150690	ATU012630	ATL8C25120:656..963	gap2	ATCEA4S13987	96							
150691	ATU012631	ATL8C11445:274..1	gap2	ATCEA4C129928_1	96							
150692	ATU012632	ATL8C25077:1011..1272	gap2	ATCEA4S26521	96							
150693	ATU012633	ATL8C38223:1..994	gap2	ATCEA4S12371, ATCEA4S25190, ATCEA4C22425	96, 94, 94							

				1								
150694	ATU0126634	ATL8C2519:67..341	gap2	ATCEA4C76_1, ATCEA4S10809	96, 84							
150695	ATU0126635	ATL8C2496:2961..3211	gap2	ATCEA4S12430	96							
150696	ATU0126636	ATL8C24953:1118..950	gap2	ATCEA4S25373	96							
150697	ATU0126637	ATL8C24878:729..191	gap2	ATCEA4S2575	96							
150698	ATU0126638	ATL8C30578:1..474	gap2	ATCEA4C2268_1	96							
150699	ATU0126639	ATL8C11391:314..710	gap2	ATCEA4C4711_1	96							
150700	ATU0126640	ATL8C38175:535..776	gap2	ATCEA4C37364_1	96							
150701	ATU0126641	ATL8C2089:1..670	gap2	ATCEA4S26113, ATCEA4C116978_1	96, 91							
150702	ATU0126642	ATL8C24797:2082..2913	gap2	ATCEA4C57720_1	96							
150703	ATU0126643	ATL8C38141:998..1337	gap2	ATCEA4C40736_1	96							
150704	ATU0126644	ATL8C24764:1	gap2	ATCEA4S13131	96							

		..324										
150705	ATU012645	ATL8C2461:2307..2595	gap2	ATCEA4S17755	96							
150706	ATU012646	ATL8C24568:558..998	gap2	ATCEA4C82259_1	96							
150707	ATU012647	ATL8C24501:73..393	gap2	ATCEA4S26543	96							
150708	ATU012648	ATL8C24480:712..388	gap2	ATCEA4C28889_1	96							
150709	ATU012649	ATL8C24373:1180..1495	gap2	ATCEA4S26628	96							
150710	ATU012650	ATL8C38088:2286..1287	gap2	ATCEA4C117342_1, ATCEA4C117342_2	96, 94							
150711	ATU012651	ATL8C24345:216..644	gap2	ATCEA4C93656_1	96							
150712	ATU012652	ATL8C5814:340..123	gap2	ATCEA4C9754_1	96							
150713	ATU012653	ATL8C24292:243..58	gap2	ATCEA4S1546	96							
150714	ATU012654	ATL8C24284:1834..1601	gap2	ATCEA4S30549.	96							
150715	ATU012655	ATL8C11331:182..1	gap2	ATCEA4C28364_1	96							
150716	ATU012	ATL8C1	gap2	ATCEA4	96							

	656	1307:528..1		S34870								
150717	ATU012657	ATL8C24149:555..260	gap2	ATCEA4S30645	96							
150718	ATU012658	ATL8C24003:685..1154	gap2	ATCEA4C3313_1	96							
150719	ATU012659	ATL8C2397:448..1217	gap2	ATCEA4C129234_1	96							
150720	ATU012660	ATL8C23871:5098..5288	gap2	ATCEA4S12869	96							
150721	ATU012661	ATL8C23768:4441..4339	gap2	ATCEA4S12591	96							
150722	ATU012662	ATL8C14517:1..698	gap2	ATCEA4C39277_2, ATCEA4C39277_1	96, 93							
150723	ATU012663	ATL8C23737:488..631	gap2	ATCEA4C48677_1	96							
150724	ATU012664	ATL8C23668:520..27	gap2	ATCEA4C23615_1	96							
150725	ATU012665	ATL8C32284:220..1	gap2	ATCEA4C14131_1	96							
150726	ATU012666	ATL8C25172:1708..1489	gap2	ATCEA4C4843_1, ATCEA4C4843_3	96, 94							

150727	ATU0126 67	ATL8C2 3500:1 190..1 115	gap2	ATCEA4 C88925 _1	96							
150728	ATU0126 68	ATL8C2 3368:2 13..1	gap2	ATCEA4 C35132 1	96							
150729	ATU0126 69	ATL8C2 3316:5 91..64 9	gap2	ATCEA4 C10015 7_1	96							
150730	ATU0126 70	ATL8C3 7796:4 43..92	gap2	ATCEA4 S10151 , ATCEA4 S10118	96, 82							
150731	ATU0126 71	ATL8C2 3309:9 21..13 00	gap2	ATCEA4 S12120	96							
150732	ATU0126 72	ATL8S2 3928:3 01..48 2	gap2	ATCEA4 C10339 0_1	96							
150733	ATU0126 73	ATL8C1 1237:2 16..56 2	gap2	ATCEA4 C14623 3_1	96							
150734	ATU0126 74	ATL8C2 3094:2 59..1	gap2	ATCEA4 S26532	96							
150735	ATU0126 75	ATL8C2 3069:6 14..84 8	gap2	ATCEA4 S3382	96							
150736	ATU0126 76	ATL8C2 3016:6 00..31 2	gap2	ATCEA4 S17076	96							
150737	ATU0126 77	ATL8C2 2926:2 95..10 5	gap2	ATCEA4 C30118 _1	96							
150738	ATU012	ATL8C2	gap2	ATCEA4	96							

	678	2912:561..189		S12657								
150739	ATU012679	ATL8C32029:117..285	gap2	ATCEA4C43302_1	96							
150740	ATU012680	ATL8C33471:798..1	gap2	ATCEA4C1696_1, ATCEA4C1696_2	96, 95							
150741	ATU012681	ATL8C2274:1993..1734	gap2	ATCEA4S4835	96							
150742	ATU012682	ATL8C22688:411..829	gap2	ATCEA4S4216	96							
150743	ATU012683	ATL8C22590:16..341	gap2	ATCEA4S1358	96							
150744	ATU012684	ATL8C22544:877..466	gap2	ATCEA4C32494_1	96							
150745	ATU012685	ATL8C22503:1853..2340	gap2	ATCEA4S2370	96							
150746	ATU012686	ATL8C11159:398..626	gap2	ATCEA4S4795, ATCEA4C1738_1	96, 92							
150747	ATU012687	ATL8C22422:338..1	gap2	ATCEA4C121978_1	96							
150748	ATU012688	ATL8C22379:3855..3398	gap2	ATCEA4S7	96							

150749	ATU012689	ATL8C11138:519..1	gap2	ATCEA4C120492_1	96							
150750	ATU012690	ATL8C22288:3165..2748	gap2	ATCEA4S24218	96							
150751	ATU012691	ATL8C22174:1548..1168	gap2	ATCEA4C34329_1	96							
150752	ATU012692	ATL8C22083:1485..1058	gap2	ATCEA4S26833	96							
150753	ATU012693	ATL8C22045:870..1156	gap2	ATCEA4S32238	96							
150754	ATU012694	ATL8C22011:365..280	gap2	ATCEA4S673	96							
150755	ATU012695	ATL8C11041:187..562	gap2	ATCEA4S12357	96							
150756	ATU012696	ATL8S13671:1..126	gap2	ATCEA4C8903_1	96							
150757	ATU012697	ATL8C11023:151..467	gap2	ATCEA4S30363	96							
150758	ATU012698	ATL8C2167:284..657	gap2	ATCEA4S7	96							
150759	ATU012699	ATL8C21894:2373..2153	gap2	ATCEA4C19305_1	96							
150760	ATU012700	ATL8C1520:914..1	gap2	ATCEA4C11215_1	96							

150761	ATU012701	ATL8C21580:438..681	gap2	ATCEA4S129	96							
150762	ATU012702	ATL8C21488:1..260	gap2	ATCEA4S17123	96							
150763	ATU012703	ATL8C21454:925..1015	gap2	ATCEA4S22664	96							
150764	ATU012704	ATL8C10940:985..826	gap2	ATCEA4S29830	96							
150765	ATU012705	ATL8C4600:426..1	gap2	ATCEA4C54470_1	96							
150766	ATU012706	ATL8C21371:829..1244	gap2	ATCEA4S3675	96							
150767	ATU012707	ATL8C21312:550..116	gap2	ATCEA4S11999	96							
150768	ATU012708	ATL8C21235:725..284	gap2	ATCEA4C15934_1	96							
150769	ATU012709	ATL8C21204:1..351	gap2	ATCEA4C15063_1	96							
150770	ATU012710	ATL8C21070:1..614	gap2	ATCEA4C9902_1	96							
150771	ATU012711	ATL8C21045:1..271	gap2	ATCEA4S35997	96							
150772	ATU012712	ATL8C10926:323..104	gap2	ATCEA4S2155	96							
150773	ATU012	ATL8C2	gap2	ATCEA4	96							

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	713	0859:1..368		S4526								
150774	ATU012714	ATL8C22192:613..1183	gap2	ATCEA4C39445_1, ATCEA4C39445_2	96, 90							
150775	ATU012715	ATL8C10886:847..666	gap2	ATCEA4S33678	96							
150776	ATU012716	ATL8C26368:1014..709	gap2	ATCEA4C144026_1	96							
150777	ATU012717	ATL8C20611:788..1115	gap2	ATCEA4S20330	96							
150778	ATU012718	ATL8C20592:433..1171	gap2	ATCEA4C100423_1	96							
150779	ATU012719	ATL8C20583:484..775	gap2	ATCEA4S4026	96							
150780	ATU012720	ATL8C21550:92..1	gap2	ATCEA4C12974_1, ATCEA4S18883	96, 86							
150781	ATU012721	ATL8C20463:717..941	gap2	ATCEA4C18815_1	96							
150782	ATU012722	ATL8C20455:465..691	gap2	ATCEA4S5634	96							
150783	ATU012723	ATL8C2043:917..94	gap2	ATCEA4S403	96							

150784	ATU012724	ATL8C20382:1036..1348	gap2	ATCEA4S12272	96							
150785	ATU012725	ATL8C47483:302..1	gap2	ATCEA4C381_1	96							
150786	ATU012726	ATL8C20289:593..1124	gap2	ATCEA4C132722_1	96							
150787	ATU012727	ATL8C20276:2341..2162	gap2	ATCEA4S13696	96							
150788	ATU012728	ATL8C20269:2625..2845	gap2	ATCEA4S30214	96							
150789	ATU012729	ATL8C22360:552..697	gap2	ATCEA4C19275_1	96							
150790	ATU012730	ATL8C20200:2971..3183	gap2	ATCEA4S30637	96							
150791	ATU012731	ATL8C5356:2838..2118	gap2	ATCEA4C103599_1, ATCEA4S34297	96, 88							
150792	ATU012732	ATL8C20154:333..723	gap2	ATCEA4C10166_1	96							
150793	ATU012733	ATL8C20111:55..1	gap2	ATCEA4S30430	96							
150794	ATU012734	ATL8C20076:1430..1242	gap2	ATCEA4C38176_1	96							
150795	ATU012	ATL8C2	gap2	ATCEA4	96							

	735	0076:458..689		C27408_1								
150796	ATU012736	ATL8C19966:364..485	gap2	ATCEA4C34210_1, ATCEA4S22944	96, 95							
150797	ATU012737	ATL8C22461:3949..4334	gap2	ATCEA4C19441_1, ATCEA4S33356, ATCEA4S33901	96, 95, 87							
150798	ATU012738	ATL8C19766:3650..3864	gap2	ATCEA4S13172	96							
150799	ATU012739	ATL8C22490:1222..1	gap2	ATCEA4C778_1, ATCEA4S29314	96, 86							
150800	ATU012740	ATL8C19746:46..604	gap2	ATCEA4C26505_1	96							
150801	ATU012741	ATL8C10638:110..505	gap2	ATCEA4C56069_1	96							
150802	ATU012742	ATL8C19404:1..570	gap2	ATCEA4C66744_1	96							
150803	ATU012743	ATL8C19351:275..671	gap2	ATCEA4S12123	96							
150804	ATU012744	ATL8C10620:1..164	gap2	ATCEA4S1599	96							
150805	ATU012745	ATL8C25492:3	gap2	ATCEA4C8087	96							

		19..768		1								
150806	ATU012746	ATL8C22611:558..1096	gap2	ATCEA4C14479_1, ATCEA4S1486	96, 86							
150807	ATU012747	ATL8C19160:1..264	gap2	ATCEA4S3540	96							
150808	ATU012748	ATL8C5571:1174..1726	gap2	ATCEA4S5213, ATCEA4S35947, ATCEA4C53546_1	96, 93, 87							
150809	ATU012749	ATL8C18896:1..262	gap2	ATCEA4S4856	96							
150810	ATU012750	ATL8C10516:1180..1862	gap2	ATCEA4C21300_1	96							
150811	ATU012751	ATL8S14788:1..302	gap2	ATCEA4S33412, ATCEA4C4363_1	96, 93							
150812	ATU012752	ATL8C18790:397..205	gap2	ATCEA4S552	96							
150813	ATU012753	ATL8C30651:1296..1722	gap2	ATCEA4C28686_1	96							
150814	ATU012754	ATL8C18643:352..1	gap2	ATCEA4S15586	96							
150815	ATU012755	ATL8S404:390	gap2	ATCEA4C71715	96							

		..1		_1								
150816	ATU0127 56	ATL8C18517:601..363	gap2	ATCEA4S31837	96							
150817	ATU0127 57	ATL8C2649:1..363	gap2	ATCEA4C849_1	96							
150818	ATU0127 58	ATL8C36652:3048..3474	gap2	ATCEA4S1937, ATCEA4S5454	96, 93							
150819	ATU0127 59	ATL8S23043:270..520	gap2	ATCEA4C9127_1	96							
150820	ATU0127 60	ATL8C22866:949..86	gap2	ATCEA4C7526_1, ATCEA4S24453	96, 88							
150821	ATU0127 61	ATL8C1552:1356..1156	gap2	ATCEA4S33235	96							
150822	ATU0127 62	ATL8C33809:716..1476	gap2	ATCEA4C1708_5, ATCEA4C1708_6	96, 96							
150823	ATU0127 63	ATL8C18115:306..1	gap2	ATCEA4S177	96							
150824	ATU0127 64	ATL8C5838:1093..783	gap2	ATCEA4C22755_1	96							
150825	ATU0127 65	ATL8C17981:619..195	gap2	ATCEA4S4756	96							
150826	ATU0127 66	ATL8C17943:3	gap2	ATCEA4C9459_	96							

		02..1		1								
150827	ATU012767	ATL8C17874:90..432	gap2	ATCEA4C133723_1	96							
150828	ATU012768	ATL8C10222:127..1	gap2	ATCEA4C6718_1	96							
150829	ATU012769	ATL8C17800:358..735	gap2	ATCEA4S30216	96							
150830	ATU012770	ATL8C39047:1..225	gap2	ATCEA4C16215_1	96							
150831	ATU012771	ATL8C17731:517..931	gap2	ATCEA4S19252	96							
150832	ATU012772	ATL8C17687:302..1	gap2	ATCEA4C100400_1	96							
150833	ATU012773	ATL8C17647:174..513	gap2	ATCEA4S31584	96							
150834	ATU012774	ATL8C176:99..1	gap2	ATCEA4S14119	96							
150835	ATU012775	ATL8C17532:1..190	gap2	ATCEA4S33725	96							
150836	ATU012776	ATL8C17478:124..448	gap2	ATCEA4S30209	96							
150837	ATU012777	ATL8C36321:1340..777	gap2	ATCEA4S13907, ATCEA4S35127	96, 89							
150838	ATU012778	ATL8C17325:363..1	gap2	ATCEA4S11765	96							
150839	ATU012	ATL8C1	gap2	ATCEA4	96							

	779	0109:1267..1128		C71186_1								
150840	ATU012780	ATL8C17311:2772..2511	gap2	ATCEA4S2085	96							
150841	ATU012781	ATL8C17287:1..107	gap2	ATCEA4C19321_2	96							
150842	ATU012782	ATL8S17547:214..1	gap2	ATCEA4S6103, ATCEA4C35093_1	96, 94							
150843	ATU012783	ATL8C36274:652..533	gap2	ATCEA4C32574_1, ATCEA4S18475	96, 88							
150844	ATU012784	ATL8C1718:301..745	gap2	ATCEA4C167194_1	96							
150845	ATU012785	ATL8C17179:122..456	gap2	ATCEA4S3916	96							
150846	ATU012786	ATL8C11161:1..117	gap2	ATCEA4C18946_1	96							
150847	ATU012787	ATL8C17168:1611..1230	gap2	ATCEA4C12826_1	96							
150848	ATU012788	ATL8C17168:535..1	gap2	ATCEA4C41277_1	96							
150849	ATU012789	ATL8C2330:2907..3214	gap2	ATCEA4C56208_1	96							
150850	ATU012790	ATL8C6042:578..40	gap2	ATCEA4S13381,	96, 88, 82							

				ATCEA4C42226_1, ATCEA4C42226_3								
150851	ATU012791	ATL8C1704:606..835	gap2	ATCEA4S8200	96							
150852	ATU012792	ATL8C25668:1..997	gap2	ATCEA4C2024_1, ATCEA4S29466	96, 95							
150853	ATU012793	ATL8S22244:517..1	gap2	ATCEA4C14057_2, ATCEA4C14057_1	96, 87							
150854	ATU012794	ATL8C1685:233..1	gap2	ATCEA4C51023_2	96							
150855	ATU012795	ATL8C16837:524..1	gap2	ATCEA4S4227	96							
150856	ATU012796	ATL8C16686:3543..3619	gap2	ATCEA4S25244	96							
150857	ATU012797	ATL8C36094:4574..3837	gap2	ATCEA4S29914, ATCEA4S36054, ATCEA4C132750_1	96, 93, 83							
150858	ATU012798	ATL8C16586:516..1	gap2	ATCEA4C33952_1	96							
150859	ATU012799	ATL8C16567:4	gap2	ATCEA4S8131	96							

		52..158										
150860	ATU012800	ATL8C16549:212..1	gap2	ATCEA4S6110	96							
150861	ATU012801	ATL8C1654:633..1018	gap2	ATCEA4C40999_1	96							
150862	ATU012802	ATL8C30394:2528..2264	gap2	ATCEA4C16889_1	96							
150863	ATU012803	ATL8C16403:2143..1731	gap2	ATCEA4S23362	96							
150864	ATU012804	ATL8C1634:6010..5555	gap2	ATCEA4C3848_1	96							
150865	ATU012805	ATL8C6347:1..364	gap2	ATCEA4C973_1, ATCEA4S33862	96, 89							
150866	ATU012806	ATL8C16274:1185..1519	gap2	ATCEA4S30029	96							
150867	ATU012807	ATL8C16259:3490..3090	gap2	ATCEA4C7969_1	96							
150868	ATU012808	ATL8C16257:349..762	gap2	ATCEA4C60261_1	96							
150869	ATU012809	ATL8C16224:1718..1589	gap2	ATCEA4S30436	96							
150870	ATU012810	ATL8C16172:2	gap2	ATCEA4S4355	96							

		33..1										
150871	ATU012811	ATL8C16144:1464..1086	gap2	ATCEA4C122072_1	96							
150872	ATU012812	ATL8C1607:1..234	gap2	ATCEA4S13074	96							
150873	ATU012813	ATL8C16017:4548..4413	gap2	ATCEA4S10829	96							
150874	ATU012814	ATL8C2374:2055..2268	gap2	ATCEA4C103380_1	96							
150875	ATU012815	ATL8C15634:169..443	gap2	ATCEA4S30687	96							
150876	ATU012816	ATL8C15577:1..200	gap2	ATCEA4S13776	96							
150877	ATU012817	ATL8S9617:218..1	gap2	ATCEA4S15822, ATCEA4S26261	96, 94							
150878	ATU012818	ATL8S21816:538..98	gap2	ATCEA4C100311_1	96							
150879	ATU012819	ATL8S96:94..270	gap2	ATCEA4C9722_1, ATCEA4S24715	96, 85							
150880	ATU012820	ATL8C15182:1..369	gap2	ATCEA4S265	96							
150881	ATU012821	ATL8C23959:61..949	gap2	ATCEA4S12412, ATCEA4S20335	96, 83							

150882	ATU0122	ATL8C35677:1463..1776	gap2	ATCEA4C22845_1	96							
150883	ATU0123	ATL8S21972:372..148	gap2	ATCEA4C6154_1	96							
150884	ATU0124	ATL8C15101:993..586	gap2	ATCEA4S30129	96							
150885	ATU0125	ATL8C15093:806..1206	gap2	ATCEA4S30176	96							
150886	ATU0126	ATL8C15079:805..360	gap2	ATCEA4S20809	96							
150887	ATU0127	ATL8C24003:1318..747	gap2	ATCEA4S24978, ATCEA4C3313_3, ATCEA4C3313_4	96, 93, 93							
150888	ATU0128	ATL8C6632:37..220	gap2	ATCEA4C47200_1, ATCEA4S5961	96, 93							
150889	ATU0129	ATL8C15013:331..175	gap2	ATCEA4S29845	96							
150890	ATU0130	ATL8C1501:852..1151	gap2	ATCEA4S14662	96							
150891	ATU0131	ATL8C14868:2	gap2	ATCEA4S12973	96							

		06..1										
150892	ATU012832	ATL8S19402:536..318	gap2	ATCEA4S16370	96							
150893	ATU012833	ATL8C31783:339..652	gap2	ATCEA4S6191	96							
150894	ATU012834	ATL8S19286:220..123	gap2	ATCEA4S28947	96							
150895	ATU012835	ATL8C28173:795..1048	gap2	ATCEA4C57150_1, ATCEA4S33820	96, 90							
150896	ATU012836	ATL8C14778:3401..3029	gap2	ATCEA4S11753	96							
150897	ATU012837	ATL8S19281:1..129	gap2	ATCEA4S3778	96							
150898	ATU012838	ATL8C13298:1489..1921	gap2	ATCEA4C2114_1	96							
150899	ATU012839	ATL8C29584:2120..2695	gap2	ATCEA4S13826, ATCEA4C9410_1, ATCEA4S10484	96, 90, 88							
150900	ATU012840	ATL8S22458:1..452	gap2	ATCEA4C81940_1, ATCEA4S15185, ATCEA4	96, 86, 84							

				S32962								
150901	ATU012841	ATL8S13600:574..654	gap2	ATCEA4S17591, ATCEA4S18094	96, 84							
150902	ATU012842	ATL8S18219:1..394	gap2	ATCEA4C21440_1	96							
150903	ATU012843	ATL8C4820:1470..2931	gap2	ATCEA4C120666_2, ATCEA4S33870, ATCEA4S34265	95, 90, 84			g2739387	100	215	1.1e-18	(AC002505) hypothetical protein [Arabidopsis thaliana]
150904	ATU012844	ATL8S13581:1..603	gap2	ATCEA4S14326, ATCEA4C120443_1	96, 96							
150905	ATU012845	ATL8C15975:712..518	gap2	ATCEA4C23385_1	96							
150906	ATU012846	ATL8S17446:302..423	gap2	ATCEA4S30431	96							
150907	ATU012847	ATL8C7710:1035..92	gap2	ATCEA4C16603_1, ATCEA4S9861, ATCEA4S7167	96, 91, 88							
150908	ATU012848	ATL8S17286:421..545	gap2	ATCEA4S34473	96							

150909	ATU012849	ATL8S13448:616..2666	gap2	ATCEA4C20362_1	96							
150910	ATU012850	ATL8S134:1..531	gap2	ATCEA4S404, ATCEA4S12009, ATCEA4S5468	96, 85, 83							
150911	ATU012851	ATL8S17100:111..1	gap2	ATCEA4C22496_3	96							
150912	ATU012852	ATL8S17043:1..391	gap2	ATCEA4C152931_1	96							
150913	ATU012853	ATL8C26646:234..1	gap2	ATCEA4S12760, ATCEA4S12761	96, 84							
150914	ATU012854	ATL8S17028:1..165	gap2	ATCEA4S11220	96							
150915	ATU012855	ATL8C31864:1..262	gap2	ATCEA4C895_1	96							
150916	ATU012856	ATL8C35094:1..150	gap2	ATCEA4C40524_1	96							
150917	ATU012857	ATL8S17108:264..66	gap2	ATCEA4C6037_1	96							
150918	ATU012858	ATL8C23762:1..128	gap2	ATCEA4C120725_1	96							
150919	ATU012859	ATL8S16573:187..1	gap2	ATCEA4C75270_1	96							
150920	ATU012860	ATL8S16338:628..518	gap2	ATCEA4S66	96							

150921	ATU012861	ATL8C26681:3158..3282	gap2	ATCEA4C16887_1	96							
150922	ATU012862	ATL8S1617:404..565	gap2	ATCEA4S4381	96							
150923	ATU012863	ATL8S13073:610..77	gap2	ATCEA4C2971_1	96							
150924	ATU012864	ATL8S8998:1..502	gap2	ATCEA4C9181_1	96							
150925	ATU012865	ATL8S15558:498..278	gap2	ATCEA4C991_3	96							
150926	ATU012866	ATL8C2426:1..169	gap2	ATCEA4C86887_1	96							
150927	ATU012867	ATL8C31972:711..198	gap2	ATCEA4C35243_1	96							
150928	ATU012868	ATL8S15163:265..544	gap2	ATCEA4C99073_2	96							
150929	ATU012869	ATL8C3137:820..1112	gap2	ATCEA4S26665, ATCEA4S18782	96, 86							
150930	ATU012870	ATL8C34387:810..1263	gap2	ATCEA4C7922_1	96							
150931	ATU012871	ATL8C26529:166..1	gap2	ATCEA4C118718_1	96							
150932	ATU012872	ATL8C7915:892..408	gap2	ATCEA4C92974_1, ATCEA4	96, 94							

				S20497								
150933	ATU0128 73	ATL8C11442:570..1	gap2	ATCEA4C1047_1	96							
150934	ATU0128 74	ATL8S14688:9..362	gap2	ATCEA4C65278_1	96							
150935	ATU0128 75	ATL8C45428:1061..764	gap2	ATCEA4C8123_1	96							
150936	ATU0128 76	ATL8C32009:443..37	gap2	ATCEA4S26606	96							
150937	ATU0128 77	ATL8C32029:737..1165	gap2	ATCEA4S7934	96							
150938	ATU0128 78	ATL8S14028:406..547	gap2	ATCEA4S15125	96							
150939	ATU0128 79	ATL8C32031:583..976	gap2	ATCEA4S30122	96							
150940	ATU0128 80	ATL8C44235:1..194	gap2	ATCEA4C74032_2	96							
150941	ATU0128 81	ATL8S13839:1..219	gap2	ATCEA4S4353	96							
150942	ATU0128 82	ATL8C7940:1..939	gap2	ATCEA4C25856_2, ATCEA4C25856_3, ATCEA4C25856_1	96, 89, 89							
150943	ATU0128 83	ATL8S13560:71..203	gap2	ATCEA4S27070	96							

150944	ATU0128 84	ATL8C40829:989..1348	gap2	ATCEA4C523_1, ATCEA4S31757	96, 86							
150945	ATU0128 85	ATL8C29633:99..1	gap2	ATCEA4C29075_2, ATCEA4C29075_1, ATCEA4S12731	96, 96, 95							
150946	ATU0128 86	ATL8S19409:1..57	gap2	ATCEA4C8143_1	96							
150947	ATU0128 87	ATL8C1074:525..793	gap2	ATCEA4S19830, ATCEA4S28113	96, 86							
150948	ATU0128 88	ATL8C7962:689..438	gap2	ATCEA4C5140_1	96							
150949	ATU0128 89	ATL8C34603:580..85	gap2	ATCEA4C17261_1	96							
150950	ATU0128 90	ATL8S13166:482..602	gap2	ATCEA4S35878	96							
150951	ATU0128 91	ATL8S13138:573..495	gap2	ATCEA4C119195_1	96							
150952	ATU0128 92	ATL8C39248:788..609	gap2	ATCEA4C24274_1	96							
150953	ATU0128 93	ATL8S12179:87..389	gap2	ATCEA4C96217_1	96							
150954	ATU0128 94	ATL8C32090:1	gap2	ATCEA4S30528	96							

		..225										
150955	ATU0128895	ATL8S12894:193..489	gap2	ATCEA4S1191	96							
150956	ATU0128896	ATL8S12839:215..1	gap2	ATCEA4S17752	96							
150957	ATU0128897	ATL8C48910:1324..1	gap2	ATCEA4C15774_1, ATCEA4C69923_1, ATCEA4C69923_2	96, 93, 88							
150958	ATU0128898	ATL8C32124:702..341	gap2	ATCEA4C47105_1	96							
150959	ATU0128899	ATL8C8009:797..1373	gap2	ATCEA4C1932_1	96							
150960	ATU0128900	ATL8C12425:430..688	gap2	ATCEA4S678	96							
150961	ATU0128901	ATL8S11818:375..1	gap2	ATCEA4C92177_1	96							
150962	ATU0128902	ATL8S12154:143..1	gap2	ATCEA4C102341 1	96							
150963	ATU0128903	ATL8C16688:56..493	gap2	ATCEA4C21428_1, ATCEA4C1958_1, ATCEA4S34081,	96, 87, 84, 83							

				ATCEA4S2378								
150964	ATU012904	ATL8C32268:1208..998	gap2	ATCEA4C18017_1	96							
150965	ATU012905	ATL8S11446:343..433	gap2	ATCEA4C119727_1	96							
150966	ATU012906	ATL8S11314:1..96	gap2	ATCEA4S6255	96							
150967	ATU012907	ATL8C1849:273..1	gap2	ATCEA4C51095_1, ATCEA4S31039	96, 94							
150968	ATU012908	ATL8C32280:1553..2032	gap2	ATCEA4C44796_1	96							
150969	ATU012909	ATL8S11121:246..628	gap2	ATCEA4S30289	96							
150970	ATU012910	ATL8C6901:780..999	gap2	ATCEA4C11123_1, ATCEA4S5252	96, 83							
150971	ATU012911	ATL8C9858:552..367	gap2	ATCEA4C5497_1	96							
150972	ATU012912	ATL8C30374:2586..2754	gap2	ATCEA4C1237_1	96							
150973	ATU012913	ATL8S24619:448..1	gap2	ATCEA4C302_1	96							
150974	ATU012914	ATL8C26092:1985..1	gap2	ATCEA4S27008,	96, 93							

		580		ATCEA4S16740								
150975	ATU012915	ATL8C40012:1304..1151	gap2	ATCEA4C28327_1, ATCEA4S10408	96, 89							
150976	ATU012916	ATL8C31694:2068..1144	gap2	ATCEA4C5567_2, ATCEA4S1158	96, 95							
150977	ATU012917	ATL8C26492:1..729	gap2	ATCEA4C17385_1, ATCEA4C17385_2	96, 93							
150978	ATU012918	ATL8S10201:172..1	gap2	ATCEA4C20881_1	96							
150979	ATU012919	ATL8C8408:1032..1350	gap2	ATCEA4C39414_1, ATCEA4S2719	96, 89							
150980	ATU012920	ATL8S2669:166..442	gap2	ATCEA4C1439_1, ATCEA4S581, ATCEA4S17812	96, 96, 84							
150981	ATU012921	ATL8C9903:352..532	gap2	ATCEA4C30272_1	96							
150982	ATU012922	ATL8C9902:649..35	gap2	ATCEA4C77113_1	96							
150983	ATU012923	ATL8C9797:1976..1849	gap2	ATCEA4S8272	96							
150984	ATU012	ATL8C1	gap2	ATCEA4	96, 93							

	924	1263:4 46..75 1		C5347_ 1, ATCEA4 S726								
150985	ATU012 925	ATL8C9 793:68 7..268	gap2	ATCEA4 S4861	96							
150986	ATU012 926	ATL8C1 1667:1 ..159	gap2	ATCEA4 C9687_ 1	96							
150987	ATU012 927	ATL8C9 78:647 ..558	gap2	ATCEA4 S3521	96							
150988	ATU012 928	ATL8C3 5339:6 783..6 645	gap2	ATCEA4 S15282 , ATCEA4 S25417	96, 93							
150989	ATU012 929	ATL8C7 385:73 6..131 4	gap2	ATCEA4 C30223 _2	96							
150990	ATU012 930	ATL8C9 743:21 47..25 58	gap2	ATCEA4 C10183 8_1, ATCEA4 S25008	96, 87							
150991	ATU012 931	ATL8C4 1587:1 ..512	gap2	ATCEA4 C31340 _1, ATCEA4 C94497 _1	96, 96							
150992	ATU012 932	ATL8S3 844:70 0..433	gap2	ATCEA4 C17311 _1	96							
150993	ATU012 933	ATL8C9 591:22 0..1	gap2	ATCEA4 S31869	96							
150994	ATU012 934	ATL8C9 580:1. .129	gap2	ATCEA4 C32223 _1	96							
150995	ATU012 935	ATL8C2 6668:1	gap2	ATCEA4 C11868	96, 87							

		..832		9_1, ATCEA4 S13928								
150996	ATU012 936	ATL8C9 472:49 ..286	gap2	ATCEA4 S32332	96							
150997	ATU012 937	ATL8S1 7625:3 81..21 5	gap2	ATCEA4 C20753 _1	96							
150998	ATU012 938	ATL8C4 2811:3 07..1	gap2	ATCEA4 C487_1	96							
150999	ATU012 939	ATL8C9 417:14 9..1	gap2	ATCEA4 S33227	96							
151000	ATU012 940	ATL8C9 404:34 9..1	gap2	ATCEA4 S31506	96							
151001	ATU012 941	ATL8C3 2508:8 42..59 4	gap2	ATCEA4 S582	96							
151002	ATU012 942	ATL8C3 5305:1 38..1	gap2	ATCEA4 C70948 _1	96							
151003	ATU012 943	ATL8C3 5650:1 060..1 406	gap2	ATCEA4 C271_1 , ATCEA4 S36233	96, 96							
151004	ATU012 944	ATL8C4 6255:1 021..5 78	gap2	ATCEA4 S11655	96							
151005	ATU012 945	ATL8C3 5301:1 156..1 003	gap2	ATCEA4 C28864 _1	96							
151006	ATU012 946	ATL8C9 252:10 3..586	gap2	ATCEA4 S25812	96							
151007	ATU012 947	ATL8C3 1839:2	gap2	ATCEA4 C5776	96, 92							

		16..848		1, ATCEA4C5776_2								
151008	ATU012948	ATL8C9245:1..180	gap2	ATCEA4S4723	96							
151009	ATU012949	ATL8C31844:946..1449	gap2	ATCEA4C117853_1, ATCEA4S33011	96, 85							
151010	ATU012950	ATL8C32619:1279..1361	gap2	ATCEA4S791	96							
151011	ATU012951	ATL8C33678:1..1112	gap2	ATCEA4C80413_1, ATCEA4S28017	96, 89							
151012	ATU012952	ATL8C9042:493..686	gap2	ATCEA4S30602	96							
151013	ATU012953	ATL8S21729:176..1	gap2	ATCEA4C787_1, ATCEA4C787_5	96, 84							
151014	ATU012954	ATL8C27778:1..373	gap2	ATCEA4C102488_1	96							
151015	ATU012955	ATL8C33670:256..1	gap2	ATCEA4C18957_1	96							
151016	ATU012956	ATL8C32645:100..814	gap2	ATCEA4C78097_1	96							
151017	ATU012957	ATL8C8933:630..204	gap2	ATCEA4C15359_1	96							
151018	ATU012958	ATL8C8905:78	gap2	ATCEA4C11849	96							

		78..7493		3_1								
151019	ATU0129 59	ATL8C8879:1..117	gap2	ATCEA4C71040_1	96							
151020	ATU0129 60	ATL8C8875:621..686	gap2	ATCEA4S3407	96							
151021	ATU0129 61	ATL8S10518:487..635	gap2	ATCEA4C3463_1	96							
151022	ATU0129 62	ATL8C25500:215..517	gap2	ATCEA4C2165_1	96							
151023	ATU0129 63	ATL8C11614:809..40	gap2	ATCEA4S5196, ATCEA4S6133	96, 96							
151024	ATU0129 64	ATL8C36931:1288..1188	gap2	ATCEA4C16274_1	96							
151025	ATU0129 65	ATL8C8799:586..235	gap2	ATCEA4S6971	96							
151026	ATU0129 66	ATL8C8782:3002..3551	gap2	ATCEA4S6447	96							
151027	ATU0129 67	ATL8C8604:859..965	gap2	ATCEA4C526_1	96							
151028	ATU0129 68	ATL8C49375:1618..1783	gap2	ATCEA4C2220_1	96							
151029	ATU0129 69	ATL8C8632:649..360	gap2	ATCEA4C50948_1	96							
151030	ATU0129 70	ATL8C8628:412..1	gap2	ATCEA4C3364_1	96							

151031	ATU012971	ATL8C32696:54..507	gap2	ATCEA4C7917_1	96							
151032	ATU012972	ATL8C1251:622..212	gap2	ATCEA4C43650_1	96							
151033	ATU012973	ATL8C35325:100..404	gap2	ATCEA4C57338_1	96							
151034	ATU012974	ATL8C11733:1..479	gap2	ATCEA4C80525_1	96							
151035	ATU012975	ATL8C8431:912..1197	gap2	ATCEA4C2648_1	96							
151036	ATU012976	ATL8C11738:798..942	gap2	ATCEA4C4560_1	96							
151037	ATU012977	ATL8C32772:1262..1427	gap2	ATCEA4S35011	96							
151038	ATU012978	ATL8C1177:326..704	gap2	ATCEA4C59975_1, ATCEA4S9908	96, 87							
151039	ATU012979	ATL8C8321:1529..1156	gap2	ATCEA4S7	96							
151040	ATU012980	ATL8C46773:232..701	gap2	ATCEA4C21526_1	96							
151041	ATU012981	ATL8C82:1122..1038	gap2	ATCEA4S23953	96							
151042	ATU012982	ATL8C8128:1..157	gap2	ATCEA4S3966	96							

151043	ATU012983	ATL8C32814:1..196	gap2	ATCEA4S1183, ATCEA4S6024	96, 84							
151044	ATU012984	ATL8C8042:1..377	gap2	ATCEA4C183221	96							
151045	ATU012985	ATL8C7963:741..1204	gap2	ATCEA4C84338_1, ATCEA4S33223	96, 82							
151046	ATU012986	ATL8C7917:6712..6502	gap2	ATCEA4S60	96							
151047	ATU012987	ATL8C21799:823..2921	gap2	ATCEA4C100939_1, ATCEA4S31300, ATCEA4S2711	95, 91, 83			g1418331	100	1168	7.0e-100	(X95909) receptor like protein kinase [Arabidopsis thaliana]
151048	ATU012988	ATL8C7865:200..1	gap2	ATCEA4S462	96							
151049	ATU012989	ATL8C7708:349..750	gap2	ATCEA4S4145	96							
151050	ATU012990	ATL8C35123:1305..905	gap2	ATCEA4C29994_1, ATCEA4S22871, ATCEA4C29994_2	96, 94, 93							
151051	ATU012	ATL8S1	gap2	ATCEA4	96, 91							

	991	0004:358..1		C61416_1, ATCEA4S10407								
151052	ATU012992	ATL8C11983:430..510	gap2	ATCEA4C55747_1	96							
151053	ATU012993	ATL8C12532:1..189	gap2	ATCEA4S11718	96							
151054	ATU012994	ATL8C7470:1..105	gap2	ATCEA4S547	96							
151055	ATU012995	ATL8C32945:909..1	gap2	ATCEA4S32913	96							
151056	ATU012996	ATL8C16434:828..1518	gap2	ATCEA4C6808_1	96							
151057	ATU012997	ATL8C33350:92..482	gap2	ATCEA4S8028, ATCEA4C54268_1	96, 95							
151058	ATU012998	ATL8C7370:277..1	gap2	ATCEA4C96923_1	96							
151059	ATU012999	ATL8S768:601..1	gap2	ATCEA4C84422_1, ATCEA4S30675	96, 90							
151060	ATU013000	ATL8C7310:899..1264	gap2	ATCEA4S12920	96							
151061	ATU013001	ATL8C32049:1..621	gap2	ATCEA4S31732, ATCEA4C93357_3	96, 92							

151062	ATU0132	ATL8C32980:1..176	gap2	ATCEA4S30359	96							
151063	ATU0133	ATL8C12115:2139..2703	gap2	ATCEA4C13777_1, ATCEA4C13777_2	96, 89							
151064	ATU0134	ATL8C34171:1620..1001	gap2	ATCEA4C93121_1, ATCEA4S30494	96, 94							
151065	ATU0135	ATL8C12534:2381..2064	gap2	ATCEA4C87281_1	96							
151066	ATU0136	ATL8S877:1..364	gap2	ATCEA4C5684_1	96							
151067	ATU0137	ATL8S2491:541..427	gap2	ATCEA4C29587_1	96							
151068	ATU0138	ATL8C33012:1999..2145	gap2	ATCEA4S30535	96							
151069	ATU0139	ATL8C7004:599..893	gap2	ATCEA4S33567	96							
151070	ATU01310	ATL8S14928:413..1	gap2	ATCEA4C34378_1	96							
151071	ATU01311	ATL8C1218:1..618	gap2	ATCEA4C22900_3, ATCEA4S28786, ATCEA4S26860	96, 94, 86							
151072	ATU01312	ATL8C6942:63	gap2	ATCEA4S11751	96							

		9..1086										
151073	ATU013013	ATL8C33055:139..1	gap2	ATCEA4C28952_1	96							
151074	ATU013014	ATL8S14852:571..144	gap2	ATCEA4S25895	96							
151075	ATU013015	ATL8C2668:1457..3208	gap2	ATCEA4S27399	95			g4038066, g4773908	100, 36	770, 1297	2.9e-36, 1.5e-144	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
151076	ATU013016	ATL8C6908:2276..2172	gap2	ATCEA4C17743_1	96							
151077	ATU013017	ATL8C6510:1..132	gap2	ATCEA4C30699_1	96							
151078	ATU013018	ATL8C6492:292..1	gap2	ATCEA4C2187_1	96							
151079	ATU013019	ATL8C12549:746..1	gap2	ATCEA4C140230_1	96							
151080	ATU013	ATL8C1	gap2	ATCEA4	96							

	020	2387:277..771		C80152_1								
151081	ATU013021	ATL8C33233:1..355	gap2	ATCEA4S18448	96							
151082	ATU013022	ATL8C5792:419..668	gap2	ATCEA4S29758	96							
151083	ATU013023	ATL8C5790:1337..955	gap2	ATCEA4S12222	96							
151084	ATU013024	ATL8C9075:51..272	gap2	ATCEA4C49252_1	96							
151085	ATU013025	ATL8C12564:687..1829	gap2	ATCEA4C19317_1	95			g2245128	100	1321	1.0e-136	(Z97344) peroxidase [Arabidopsis thaliana]
151086	ATU013026	ATL8C47865:495..224	gap2	ATCEA4C26931_1	96							
151087	ATU013027	ATL8C33272:273..24	gap2	ATCEA4S14050	96							
151088	ATU013028	ATL8C17680:1492..546	gap2	ATCEA4C24744_1	96							
151089	ATU013029	ATL8C17112:191..1100	gap2	ATCEA4S35696, ATCEA4C63806_1, ATCEA4C63806_2,	96, 96, 90, 90, 89, 87							

				ATCEA4S25617, ATCEA4C63806_3, ATCEA4S35961								
151090	ATU013030	ATL8C3306:1107..1527	gap2	ATCEA4S27399, ATCEA4S344	96, 82							
151091	ATU013031	ATL8C33317:579..271	gap2	ATCEA4S31408	96							
151092	ATU013032	ATL8C5504:4002..2980	gap2	ATCEA4S30060	96							
151093	ATU013033	ATL8C42686:902..996	gap2	ATCEA4C1265_1	96							
151094	ATU013034	ATL8C12649:3283..2262	gap2	ATCEA4C10824_1	95			g2829863	100	1199	8.0e-112	(AC002396) Putative peroxidase [Arabidopsis thaliana]
151095	ATU013035	ATL8C22869:161..350	gap2	ATCEA4C4743_1	96							
151096	ATU013036	ATL8C34775:481..344	gap2	ATCEA4C25604_1	96							
151097	ATU013	ATL8C5	gap2	ATCEA4	96							

	037	324:2364..1867		C21992_1								
151098	ATU013038	ATL8C2951:558..58	gap2	ATCEA4C76924_1	96							
151099	ATU013039	ATL8C8675:1652..2033	gap2	ATCEA4C54654_2, ATCEA4S26751	96, 88							
151100	ATU013040	ATL8C25731:993..172	gap2	ATCEA4S5329, ATCEA4C41779_1	96, 86							
151101	ATU013041	ATL8C14287:759..440	gap2	ATCEA4C9763_1	96							
151102	ATU013042	ATL8C32706:1046..1	gap2	ATCEA4C81596_1	96							
151103	ATU013043	ATL8C5094:385..236	gap2	ATCEA4S12026	96							
151104	ATU013044	ATL8C1272:2024..2674	gap2	ATCEA4S11306, ATCEA4S114	96, 95							
151105	ATU013045	ATL8S1458:350..1	gap2	ATCEA4S6640, ATCEA4C22535_1	96, 95							
151106	ATU013046	ATL8C5039:354..851	gap2	ATCEA4C4282_1	96							
151107	ATU013047	ATL8C5031:625..1122	gap2	ATCEA4C17880_1	96							
151108	ATU013	ATL8C5	gap2	ATCEA4	96							

	048	0238:934..432		C22083_1								
151109	ATU013049	ATL8S18855:272..470	gap2	ATCEA4C6016_1, ATCEA4S1462	96, 91							
151110	ATU013050	ATL8C50153:630..450	gap2	ATCEA4C1790_1	96							
151111	ATU013051	ATL8C12765:1909..1272	gap2	ATCEA4C16944_1, ATCEA4C116186_1	96, 91							
151112	ATU013052	ATL8C50149:3307..2842	gap2	ATCEA4S33383	96							
151113	ATU013053	ATL8C50080:131..1	gap2	ATCEA4S13036	96							
151114	ATU013054	ATL8C49992:210..554	gap2	ATCEA4S30426	96							
151115	ATU013055	ATL8C3343:1501..1846	gap2	ATCEA4S26198	96							
151116	ATU013056	ATL8S19593:97..1	gap2	ATCEA4S35378, ATCEA4C4719_1	96, 93							
151117	ATU013057	ATL8C34940:1..341	gap2	ATCEA4S30191, ATCEA4S8253,	96, 96, 91, 88							

				ATCEA4C2034_1, ATCEA4S29060								
151118	ATU013058	ATL8C37270:616..500	gap2	ATCEA4C52617_1	96							
151119	ATU013059	ATL8C3345:1310..1010	gap2	ATCEA4S26570	96							
151120	ATU013060	ATL8C44173:1191..1454	gap2	ATCEA4C609_1	96							
151121	ATU013061	ATL8C12875:902..674	gap2	ATCEA4C18752_1, ATCEA4S5880	96, 85							
151122	ATU013062	ATL8C33501:613..1027	gap2	ATCEA4S33121	96							
151123	ATU013063	ATL8C30355:245..134	gap2	ATCEA4S33335, ATCEA4C22876_1	96, 92							
151124	ATU013064	ATL8C18754:982..1057	gap2	ATCEA4C29152_2	96							
151125	ATU013065	ATL8C3007:1526..1	gap2	ATCEA4C8552_2, ATCEA4C8552_1, ATCEA4S8416	96, 92, 82							

151126	ATU0130066	ATL8S9169:48..218	gap2	ATCEA4C47750_2, ATCEA4C47750_1	96, 86							
151127	ATU0130067	ATL8C49684:194..279	gap2	ATCEA4S10671	96							
151128	ATU0130068	ATL8C33528:2738..3651	gap2	ATCEA4C19442_1	96							
151129	ATU0130069	ATL8C49567:481..983	gap2	ATCEA4S36377	96							
151130	ATU0130070	ATL8C12976:1081..1	gap2	ATCEA4S35613, ATCEA4S1389, ATCEA4S1390	96, 96, 89							
151131	ATU0130071	ATL8C49512:306..727	gap2	ATCEA4C857_11, ATCEA4C857_6, ATCEA4S8509	96, 89, 88							
151132	ATU0130072	ATL8C12617:556..923	gap2	ATCEA4S305	96							
151133	ATU0130073	ATL8C32463:1038..684	gap2	ATCEA4C89533_1	96							
151134	ATU0130074	ATL8C49358:1..154	gap2	ATCEA4S13870	96							

151135	ATU0130075	ATL8C35892:105..242	gap2	ATCEA4C41920_2	96							
151136	ATU0130076	ATL8C1308:82..988	gap2	ATCEA4C111331_2, ATCEA4C111331_1	96, 96							
151137	ATU0130077	ATL8C49260:823..1433	gap2	ATCEA4S28547	96							
151138	ATU0130078	ATL8C9658:514..1	gap2	ATCEA4C183_3	96							
151139	ATU0130079	ATL8C8774:986..932	gap2	ATCEA4C9318_1	96							
151140	ATU0130080	ATL8C13134:5460..5952	gap2	ATCEA4S30711, ATCEA4S967	96, 91							
151141	ATU0130081	ATL8C45934:650..128	gap2	ATCEA4C8658_1	96							
151142	ATU0130082	ATL8C23818:1..137	gap2	ATCEA4S35217, ATCEA4C64983_1	96, 95							
151143	ATU0130083	ATL8S28240:1..77	gap2	ATCEA4C5490_1	96							
151144	ATU0130084	ATL8C34826:239..721	gap2	ATCEA4C1814_4, ATCEA4C1814_2	96, 82							

151145	ATU0130085	ATL8C28601:565..376	gap2	ATCEA4C10969_1	96							
151146	ATU0130086	ATL8C34823:1..994	gap2	ATCEA4S29646, ATCEA4S33262	96, 83							
151147	ATU0130087	ATL8C48942:1228..1014	gap2	ATCEA4S30573	96							
151148	ATU0130088	ATL8C32661:270..745	gap2	ATCEA4C15135_3	96							
151149	ATU0130089	ATL8C48924:286..1	gap2	ATCEA4C7300_1	96							
151150	ATU0130090	ATL8C21744:1..292	gap2	ATCEA4C32109_1	96							
151151	ATU0130091	ATL8C31056:72..356	gap2	ATCEA4C32109_1, ATCEA4S905	96, 94							
151152	ATU0130092	ATL8C30486:851..1	gap2	ATCEA4C23114_4	96							
151153	ATU0130093	ATL8C48903:371..1	gap2	ATCEA4S11158	96							
151154	ATU0130094	ATL8C48875:526..432	gap2	ATCEA4S12925	96							
151155	ATU0130095	ATL8C48862:381..25	gap2	ATCEA4S2187	96							
151156	ATU0130096	ATL8C48827:1530..1	gap2	ATCEA4C7291_1	96							

		038										
151157	ATU0130097	ATL8C23256:684..34	gap2	ATCEA4C4953_1	96							
151158	ATU0130098	ATL8C13584:1348..2083	gap2	ATCEA4C18466_1, ATCEA4S6123	96, 84							
151159	ATU0130099	ATL8C48778:443..875	gap2	ATCEA4C19653_1	96							
151160	ATU0130100	ATL8C48758:1..218	gap2	ATCEA4S27461	96							
151161	ATU0130101	ATL8S10246:1..417	gap2	ATCEA4C823_1	96							
151162	ATU0130102	ATL8C48409:1797..1204	gap2	ATCEA4S33068, ATCEA4C47191_1	96, 83							
151163	ATU0130103	ATL8C13277:2050..2251	gap2	ATCEA4C62372_1	96							
151164	ATU0130104	ATL8C48679:63..153	gap2	ATCEA4S11164	96							
151165	ATU0130105	ATL8C48631:1594..1233	gap2	ATCEA4S26818	96							
151166	ATU0130106	ATL8C4859:3922..3305	gap2	ATCEA4C119359_1	96							
151167	ATU0130107	ATL8C48501:2814..3159	gap2	ATCEA4S7	96							

151168	ATU0131 08	ATL8C27761:431..1221	gap2	ATCEA4C5388_1	96							
151169	ATU0131 09	ATL8C48440:115..527	gap2	ATCEA4C81453_1	96							
151170	ATU0131 10	ATL8C48395:649..1243	gap2	ATCEA4S18437	96							
151171	ATU0131 11	ATL8C34729:867..414	gap2	ATCEA4S35470, ATCEA4S19244	96, 87							
151172	ATU0131 12	ATL8C30753:1..1819	gap2	ATCEA4S2888, ATCEA4C63985_1, ATCEA4C28495_1	95, 93, 84	ATL8C30753:8..1815	0.99	g2688544, g2911060	99, 46	240, 269	8.7e-18, 5.4e-14	(AE001163) 4-methyl-5(b-hydroxyethyl)-thiazole monophosphate biosynthesis protein (thiJ) [Borrelia burgdorferi]; (AL021961) putative protei

												n [Arabidopsis thaliana]
151173	ATU013113	ATL8C24793:1626..162	gap2	ATCEA4C52490_1, ATCEA4C2786_1, ATCEA4S23795	95, 93, 88	ATL8C24793:1535..381	0.98	g544423	99	257	0.32	GLYCINE-RICH RNA-BINDING PROTEIN 2 [Sorghum bicolor]
151174	ATU013114	ATL8C13949:1574..420	gap2	ATCEA4C36029_1, ATCEA4S5292	95, 84	ATL8C13949:812..508	0.89	g3096945	99	357	9.4e-21	(AL023094) putative auxin-regulated protein [Arabidopsis thaliana]
151175	ATU013115	ATL8C38412:1579..539	gap2	ATCEA4S33388, ATCEA4S30147	95, 94	ATL8C38412:1558..855	0.88	g3785983	99	402	1.5e-39	(AC005560) hypothetical protein [Arabidopsis thaliana]
151176	ATU013116	ATL8C28391:1..1283	gap2	ATCEA4C6126_2, ATCEA4C6126_3,	95, 93, 92, 89	ATL8C28391:342..1134	0.86	g100535	99	177	3.1e-11	hypothetical protein - swollen

				ATCEA4C6126_1, ATCEA4C6126_4								duckweed [Lemna gibba]
151177	ATU013117	ATL8C45832:2238..1378	gap2	ATCEA4S4135	95	ATL8C45832:2238..1413	0.84	g3341687	99	77	1.4e-07	(AC003672) putative ras protein [Arabidopsis thaliana]
151178	ATU013118	ATL8C23731:473..1820	gap2	ATCEA4S35164, ATCEA4S30733	95, 87	ATL8C23731:1035..1373	0.82	g4586114	99	152	4.5e-11	(AL049638) putative protein [Arabidopsis thaliana]
151179	ATU013119	ATL8C20715:1198..493	gap2	ATCEA4C48291_1, ATCEA4S6214, ATCEA4C48291_3, ATCEA4C48291_2, ATCEA4S31029	95, 93, 85, 83, 82	ATL8C20715:1135..768	0.81	g3355475	99	651	2.3e-46	(AC004218) ribosomal protein L23a [Arabidopsis thaliana]
151180	ATU013120	ATL8C27301:1..1540	gap2	ATCEA4C89872_1, ATCEA4C17863_1,	95, 87, 85	ATL8C27301:444..1348	0.74	g4314376	99	791		(AC006232) similar to PIG-L [Arabi

				ATCEA4S17909								dopsis thaliana]
151181	ATU013121	ATL8C26445:1018..1	gap2	ATCEA4C14893_1, ATCEA4S33322	95, 89	ATL8C26445:937..234	0.73	g2341039	99	405	1.1e-21	(AC000104) Similar to Nicotiana lesion-inducing ORF (gb|U66269). [Arabidopsis thaliana]
151182	ATU013122	ATL8C48138:169..1005	gap2	ATCEA4S1256	95	ATL8C48138:608..727	0.67	g3269297	99	179	3.1e-14	(AL030978) putative protein [Arabidopsis thaliana]
151183	ATU013123	ATL8C14805:2099..602	gap2	ATCEA4C3273_1	95	ATL8C14805:1555..602	0.60	g82233	99	345	1.7e-18	hypothetical protein 87 - common tobacco chloroplast [Nicotiana tabacum]
151184	ATU013124	ATL8C47299:1795..7	gap2	ATCEA4C41066_1	95	ATL8C47299:1746..1	0.59	g3935167	99	508	7.4e-51	(AC004557) F17L21

		21				406						.10 [Arabidopsis thaliana]
151185	ATU013125	ATL8C47572:4228..1	gap2	ATCEA4C32538_1	95	ATL8C47572:4050..35	0.57	g4884936, g2829910	99, 45	765, 996	1.4e-65, 9.3e-88	(AF141661) AtHVA22c [Arabidopsis thaliana]; (AC002291) Unknown protein, contains regulator of chromosome condensation motifs [Arabidopsis thaliana]
151186	ATU013126	ATL8C37788:449..1047	gap2	ATCEA4C130910_1	95	ATL8C37788:527..698	0.55	g543565	99	288	1.0e-18	hypothetical 10.0K protein - Zinnia elegans [Zinnia elegans]
151187	ATU013	ATL8C8	gap2	ATCEA4	95	ATL8C8	0.54	g24933	99	133	1.6e-	MAVICY

	127	03:2230..1550		C11213_2		03:2220..1550		19			07	ANIN [Cucurbita pepo=green zucchini, peelings, Peptide, 108 aa]
151188	ATU013128	ATL8C1216:396..4631	gap2	ATCEA4S27399, ATCEA4S344, ATCEA4S178	95, 92, 86	ATL8C1216:396..4506	0.54	g4662646, g4325354	99, 41	568, 2007	1.5e-40, 3.9e-148	(AC006429) hypothetical protein [Arabidopsis thaliana]; (AF128395) contains similarity to retrovirus-related polyproteins and to CCHC zinc finger protein (Pfam: PF00098, Score=

												16.3, E=0.051, E=1) [Arabidopsis thaliana]
151189	ATU013129	ATL8C12543:1322..686	gap2	ATCEA4C116337_1	95	ATL8C12543:1188..718	0.41	g3193285	99	133	1.8e-09	(AF069298) T14P8.18 gene product [Arabidopsis thaliana]
151190	ATU013130	ATL8C1:1939..2778	gap2	ATCEA4C34706_1	95			g3861294	99	273	6.1e-25	(AJ235273) GUANYLATE KINASE (gmk) [Rickettsia prowazekii]
151191	ATU013131	ATL8C21751:629..2140	gap2	ATCEA4C5200_2, ATCEA4C5200_1, ATCEA4S9221, ATCEA4S3498	95, 94, 91, 87			g3024127	99	1933	2.1e-189	S-ADENOSYLMETHIONINE SYNTHETASE 2 (METHIONINE ADENOSYLTRANSFERASE 2) (ADOMET SYNTHETASE

												2) [Catharanthus roseus]
151192	ATU0131 32	ATL8C48111:1691..785	gap2	ATCEA4S13216	95			g4760343	99	171	5.2e-09	(AL049769) putative SNRNP SM-like protein [Schizosaccharomyces pombe]
151193	ATU0131 33	ATL8C13973:747..1239	gap2	ATCEA4C1061_6	95			g2160146	99	445	3.8e-23	(AC000375) Strong similarity to Arabidopsis gb|X91953,F21M12.3,F21M12.1. EST gb|H36326 comes from this gene. [Arabidopsis thaliana]
151194	ATU013	ATL8C1	gap2	ATCEA4	95, 88			g18725	99	854	4.2e-	(U8901

	134	9421:1569..490		C2118_1, ATCEA4S32032				44			79	4) early light-induced protein; ELIP [Arabidopsis thaliana]
151195	ATU013135	ATL8C19869:2027..419	gap2	ATCEA4S32848, ATCEA4C47549_1	95, 95			g4539315	99	702	1.0e-53	(AL035679) putative zinc finger protein [Arabidopsis thaliana]
151196	ATU013136	ATL8C20051:1..790	gap2	ATCEA4S28494	95			g3377804	99	424		(AF075597) contains similarity to human fibrillin-2 precursor (GB:U03272) [Arabidopsis thaliana]
151197	ATU013137	ATL8C23436:617..13	gap2	ATCEA4S6819	95			g2464914	99	713	1.0e-45	(Z99708) hypoth

		15										etical protein [Arabidopsis thaliana]
151198	ATU013138	ATL8C35302:6221..7512	gap2	ATCEA4C876_14, ATCEA4S21233	95, 87			g4503719	99	283	2.5e-19	fragile histidine triad gene [Homo sapiens]
151199	ATU013139	ATL8C12808:523..1552	gap2	ATCEA4C132229_1	95			g4558660	99	808	3.4e-48	(AC007063) unknown protein [Arabidopsis thaliana]
151200	ATU013140	ATL8C12650:674..919	gap2	ATCEA4S33820	95			g3184288	99	324	4.2e-24	(AC004136) unknown protein [Arabidopsis thaliana]
151201	ATU013141	ATL8C32774:1611..1	gap2	ATCEA4S13981, ATCEA4S6851	95, 84	ATL8C32774:1611..177	0.90	g4544374	98	1974	1.8e-200	(AC006920) unknown protein [Arabidopsis thalia

												na]
151202	ATU013142	ATL8C3421:547..33	gap2	ATCEA4C28148_1	95	ATL8C3421:547..33	0.55	g2275216	98	305	5.9e-16	(AC002337) cytochrome c oxidase Vc subunit isolog [Arabidopsis thaliana]
151203	ATU013143	ATL8C18693:732..2458	gap2	ATCEA4C32107_1, ATCEA4C17466_1, ATCEA4C17466_2	95, 93, 91	ATL8C18693:732..2284	0.49	g1673344	98	131	2.9e-05	(D64002) hypothetical protein [Synechocystis sp.]
151204	ATU013144	ATL8S10134:11..434	gap2	ATCEA4S13831	95			g4263697	98	579	3.4e-40	(AC006223) putative ribosomal protein L27 [Arabidopsis thaliana]
151205	ATU013145	ATL8C2863:1..938	gap2	ATCEA4C73386_1	95			g1724112	98	117	2.7e-08	(U80037) ABA induced plasma membrane protein PM

												19 [Triticum aestivum]
151206	ATU0131146	ATL8C37443:2368..1	gap2	ATCEA4S1188	95	ATL8C37443:2281..68	0.62	g3258635	97	544		(AF041049) 4-coumarate:CoA ligase [Populus tremuloides]
151207	ATU0131147	ATL8C15632:1..1915	gap2	ATCEA4C132169_1, ATCEA4S35555, ATCEA4C137008_1	95, 93, 93	ATL8C15632:388..1708	0.65	g478809	96	1305	1.9e-137	protein kinase 6 (EC 2.7.1.-) - soybean [Glycine max]
151208	ATU0131148	ATL8C22687:685..1746	gap2	ATCEA4C55023_1	95	ATL8C22687:741..1725	0.94	g2529674, g322759	95, 76	259, 127	6.4e-23, 0.53	(AC002535) hypothetical protein [Arabidopsis thaliana]; pistil extensin-like protein (clone pMG14)

												- common tobacco (fragment) [Nicotiana tabacum]
151209	ATU013149	ATL8C19047:100..1481	gap2	ATCEA4C62676_1	95	ATL8C19047:170..1349	0.73	g3420049	94	486	1.6e-46	(AC004680) putative protein phosphatase 2C [Arabidopsis thaliana]
151210	ATU013150	ATL8C37330:1582..1	gap2	ATCEA4C9711_1, ATCEA4S35711, ATCEA4S27269	95, 94, 93	ATL8C37330:960..44	0.71	g3335378	94	415		(AC003028) Myb-related transcription activator [Arabidopsis thaliana]
151211	ATU013151	ATL8C39653:337..1	gap2	ATCEA4S34650	95	ATL8C39653:337..121	0.47	g899224	94	482	2.2e-45	(X60318) E2 [Brassica napus]
151212	ATU013152	ATL8C1058:123..1	gap2	ATCEA4C50402_1	95			g3860276	94	136	3.2e-07	(AC005824) unknow

												n protein [Arabidopsis thaliana]
151213	ATU0131 53	ATL8C44570:1689..1	gap2	ATCEA4C117832_1, ATCEA4S4928	95, 95	ATL8C44570:1538..308	0.72	g2642158	92	740	4.0e-76	(AC003000) hypothetical protein [Arabidopsis thaliana]
151214	ATU0131 54	ATL8C6434:3455..1	gap2	ATCEA4S31920, ATCEA4S31435, ATCEA4S33722, ATCEA4C29885_1	95, 92, 87, 82			g4539452	92	2867	3.2e-291	(AL049500) putative phosphoribosylanthranilate transferase [Arabidopsis thaliana]
151215	ATU0131 55	ATL8C12758:2610..593	gap2	ATCEA4C78482_1, ATCEA4C20594_1, ATCEA4S14191	95, 92, 83	ATL8C12758:1367..593	0.75	g4539310	91	1589	2.7e-132	(AL035679) putative protein [Arabidopsis thaliana]
151216	ATU0131 56	ATL8C14098:1..5148	gap2	ATCEA4C38091_2,	95, 93, 92,	ATL8C14098:349..51	0.88	g1009232	90	1511	9.8e-108	(L38828) EF-1-

				ATCEA4C116464_1, ATCEA4S11392, ATCEA4C38091_1, ATCEA4C5470_1	89, 85	48						alpha-related GTP-binding protein [Nicotiana tabacum]
151217	ATU013157	ATL8C20124:64..783	gap2	ATCEA4C51023_2, ATCEA4C51023_1	95, 93	ATL8C20124:95..683	0.66	g3341694	90	327		(AC003672) PREG-like protein [Arabidopsis thaliana]
151218	ATU013158	ATL8C31753:131..2595	gap2	ATCEA4C27553_1	95	ATL8C31753:131..1971	0.88	g4567229	89	447	7.7e-45	(AC007119) putative pectin methylesterase [Arabidopsis thaliana]
151219	ATU013159	ATL8C12317:385..2151	gap2	ATCEA4S13982, ATCEA4C4297_2, ATCEA4C4297_1, ATCEA4S7415	95, 95, 89, 83	ATL8C12317:385..2077	0.79	g2760320	89	912	1.8e-90	(AC002130) F1N21.4 [Arabidopsis thaliana]

151220	ATU0131160	ATL8C29655:3725..5067	gap2	ATCEA4S29969	95			g4895212	89	1203	2.1e-112	(AC007661) unknown protein [Arabidopsis thaliana]
151221	ATU0131161	ATL8C44521:1119..1909	gap2	ATCEA4C120256_1, ATCEA4C120247_1	95, 91			g4678222	89	434	2.0e-34	(AC007135) unknown protein [Arabidopsis thaliana]
151222	ATU0131162	ATL8C35865:87..1686	gap2	ATCEA4C731_1, ATCEA4S22229, ATCEA4S22231	95, 89, 86	ATL8C35865:149..1393	0.89	g3426062	88	1565	3.4e-156	(AJ007587) monooxygenase [Arabidopsis thaliana]
151223	ATU0131163	ATL8C46433:1194..1	gap2	ATCEA4C4787_2, ATCEA4C31202_1	95, 95	ATL8C46433:750..131	0.84	g4376815	88	505	1.3e-43	(AE001637) GutQ/KpsF Family Sugar-P Isomerase [Chlamydia pneumoniae]
151224	ATU0131164	ATL8C45836:1587..2	gap2	ATCEA4C23544_1	95	ATL8C45836:1587..1	0.79	g4538962	88	508	1.6e-18	(AL049488) hypoth

		126				992						etical protein [Arabidopsis thaliana]
151225	ATU0131165	ATL8C20561:976..2183	gap2	ATCEA4S8272, ATCEA4C534_1	95, 88	ATL8C20561:976..2153	0.71	g1546696	88	1277	6.0e-97	(X98807) peroxidase ATP21a [Arabidopsis thaliana]
151226	ATU0131166	ATL8C12395:1..640	gap2	ATCEA4C23841_1	95			g2244872	88	636	3.7e-30	(Z97338) hypothetical protein [Arabidopsis thaliana]
151227	ATU0131167	ATL8C47428:1..2535	gap2	ATCEA4C113119_1, ATCEA4C32458_1	95, 93	ATL8C47428:230..1999	0.73	g4455366	87	737	5.4e-61	(AL035524) putative protein [Arabidopsis thaliana]
151228	ATU0131168	ATL8C18296:211..3917	gap2	ATCEA4C32368_1, ATCEA4S1322	95, 94	ATL8C18296:211..2735	0.67	g4432849	87	464	2.0e-54	(AC006300) hypothetical protein [Arabidopsis thalia

												na]
151229	ATU0131169	ATL8C31964:3907..1	gap2	ATCEA4S321, ATCEA4S12828	95, 93	ATL8C31964:3889..690	0.57	g4432802	87	3544	0.0	(AC006437) putative polpolyprotein, 5' partial [Arabidopsis thaliana]
151230	ATU0131170	ATL8C24948:408..1	gap2	ATCEA4C49893_1	95			g2982820	87	108	7.7e-08	(AE000672) ribosomal protein S06 [Aquifex aeolicus]
151231	ATU0131171	ATL8C43389:1..3053	gap2	ATCEA4C42557_1	95	ATL8C43389:9..3023	0.85	g3201682	86	1490		(AF060942) extra-large G-protein [Arabidopsis thaliana]
151232	ATU0131172	ATL8C47254:1..1681	gap2	ATCEA4S2303, ATCEA4C73948_1	95, 93	ATL8C47254:59..1681	0.79	g2213600	86	950	1.4e-96	(AC000348) T7N9.20 [Arabidopsis thaliana]
151233	ATU013	ATL8C4	gap2	ATCEA4	95, 92	ATL8C4	0.56	g44328	86	1251	4.5e-	(AC006

	173	4144:3110..1		C14855_2, ATCEA4C14855_1		4144:2980..120		25			85	593) putative SOP2p protein [Arabidopsis thaliana]
151234	ATU013174	ATL8C6885:1..1739	gap2	ATCEA4S291	95	ATL8C6885:60..1679	0.98	g1076529	85	2559	9.8e-254	heat shock protein HSP71.2 - garden pea [Pisum sativum]
151235	ATU013175	ATL8C34674:305..2022	gap2	ATCEA4C19925_1	95	ATL8C34674:346..2022	0.75	g1076748	85	308	1.5e-21	major intrinsic protein - rice [Oryza sativa]
151236	ATU013176	ATL8C49415:1590..211	gap2	ATCEA4S5964, ATCEA4S5870	95, 87			g3292829	85	1283	6.2e-112	(AL031018) putative protein [Arabidopsis thaliana]
151237	ATU013177	ATL8C24551:1101..178	gap2	ATCEA4C32281_1, ATCEA4S30324	95, 93	ATL8C24551:1048..178	0.79	g4586054	84	732	1.3e-59	(AC007020) unknown protei

												n [Arabidopsis thaliana]
151238	ATU013178	ATL8C5032:1062..1883	gap2	ATCEA4S1893	95	ATL8C5032:1333..1821	0.54	g3551954	84	472	4.4e-45	(AF082030) senescence-associated protein 5 [Hemerocallis hybrid cultivar]
151239	ATU013179	ATL8C3339:2203..1	gap2	ATCEA4S34486, ATCEA4C8875_1	95, 95	ATL8C3339:2203..79	0.64	g6008555, g2317905	83, 77	169, 254	7.5e-12, 1.9e-12	(U17887) bZIP protein [Arabidopsis thaliana]; (U89959) bZIP-like protein [Arabidopsis thaliana]
151240	ATU013180	ATL8C18052:1..900	gap2	ATCEA4S14125	95	ATL8C18052:59..727	0.60	g3510260	83	768	2.0e-32	(AC005310) putative AP2 domain containing

												protein [Arabidopsis thaliana]
151241	ATU0131181	ATL8C7352:1894..293	gap2	ATCEA4C19193_2, ATCEA4C46799_1, ATCEA4S12092	95, 86, 83			g4734007	83	814	2.2e-68	(AC007178) hypothetical protein [Arabidopsis thaliana]
151242	ATU0131182	ATL8C43113:1..838	gap2	ATCEA4C963_1, ATCEA4S16123	95, 93			g1169198	83	1026	4.9e-87	DNA-DAMAGE-REPAIR/TOLERATION PROTEIN DRT101 PRECURSOR [Arabidopsis thaliana]
151243	ATU0131183	ATL8C22906:2891..1	gap2	ATCEA4S23799	95	ATL8C22906:2891..659	0.82	g2342733	82	1695	4.2e-150	(AC002341) hypothetical protein [Arabidopsis thaliana]
151244	ATU0131184	ATL8C37992:1767..1	gap2	ATCEA4S35511, ATCEA4	95, 89	ATL8C37992:1695..566	0.53	g1911477	82	572	1.9e-45	(S80863) delta 9

				C126040_1								acyl-lipid desaturase/delta 9 acyl-CoA desaturase homolog [Rosa hybrida]
151245	ATU013185	ATL8C1994:1..985	gap2	ATCEA4C6189_1	95	ATL8C1994:410..888	0.45	g4206110	82	407	2.0e-30	(AF097661) cytochrome [Mesembryanthemum crystallinum]
151246	ATU013186	ATL8C40287:1225..250	gap2	ATCEA4S66	95	ATL8C40287:1139..348	0.43	g3176665	82	1269	1.1e-128	(AC004393) T1F15.9 [Arabidopsis thaliana]
151247	ATU013187	ATL8C1307:1..830	gap2	ATCEA4C30995_1	95			g3386546	82	361	8.7e-44	(AF079503) H-protein promoter binding factor-2a [Arabidopsis

												thaliana]
151248	ATU013188	ATL8C23617:1..2358	gap2	ATCEA4C1163_1	95	ATL8C23617:86..2356	0.84	g3893079	81	1650	9.9e-147	(Y18432) glucose-1-phosphate adenylyltransferase [Arabidopsis thaliana]
151249	ATU013189	ATL8C13774:1421..1	gap2	ATCEA4C43543_1	95	ATL8C13774:845..53	0.81	g1652104	81	496	6.1e-43	(D90902) hypothetical protein [Synechocystis sp.]
151250	ATU013190	ATL8C41837:1232..1	gap2	ATCEA4C30526_1, ATCEA4S35434	95, 88	ATL8C41837:1227..13	0.95	g4038055	80	1926	2.2e-160	(AC005897) putative cytochrome P450 [Arabidopsis thaliana]
151251	ATU013191	ATL8C435:3538..793	gap2	ATCEA4C87425_1, ATCEA4S24897	95, 82	ATL8C435:2737..1348	0.93	g3256068	80	1028	4.8e-88	(Y14068) Heat Shock Factor 3 [Arabidopsis

												thaliana]
151252	ATU013192	ATL8C1071:1969..1	gap2	ATCEA4S1460, ATCEA4C16121_1	95, 95	ATL8C1071:1815..15	0.83	g2829896	80	937	2.3e-103	(AC002311) highly similar to auxin-regulated protein GH3, gp|X60033|18591 [Arabidopsis thaliana]
151253	ATU013193	ATL8C2785:4078..1936	gap2	ATCEA4C16436_1, ATCEA4C66583_1	95, 91	ATL8C2785:3953..1936	0.68	g3894193	80	605	7.9e-56	(AC005662) putative strictosidine synthase [Arabidopsis thaliana]
151254	ATU013194	ATL8C2541:1606..311	gap2	ATCEA4S1744	95			g4886280	80	454	4.9e-46	(AL050300) putative protein [Arabidopsis thaliana]
151255	ATU013195	ATL8C18657:1368..1	gap2	ATCEA4C351_1	95	ATL8C18657:1293..7	0.69	g2281780	79	1297	2.8e-101	(AB003041) O-

						7						acetyl serine (thiol) lyase [Arabi dopsis thalia na]
151256	ATU013 196	ATL8C2 8774:1 ..851	gap2	ATCEA4 C69520 _1	95			g39414 62	79	228	1.9e-17	(AF062 885) putati ve transc riptio n factor [Arabi dopsis thalia na]
151257	ATU013 197	ATL8C3 1518:4 19..11 54	gap2	ATCEA4 C21196 _1	95	ATL8C3 1518:4 96..10 05	0.89	g30045 47	78	864	1.9e-69	(AC003 673) unknow n protei n [Arabi dopsis thalia na]
151258	ATU013 198	ATL8C2 3922:4 465..5 22	gap2	ATCEA4 S321	95	ATL8C2 3922:4 341..9 27	0.87	g46462 24, g44328 02	78, 47	998, 1545	1.6e-81, 5.3e-112	(AC007 295) hypoth etical protei n [Arabi dopsis thalia na]; (AC006 437) putati ve pol

												polyprotein, 5' partial [Arabidopsis thaliana]
151259	ATU013199	ATL8C45041:1..1252	gap2	ATCEA4C57590_1, ATCEA4C3200_1, ATCEA4S8527, ATCEA4S8569	95, 93, 85, 85			g3212870	78	1150	3.4e-117	(AC004005) putative N-myristoyltransferase [Arabidopsis thaliana]
151260	ATU013200	ATL8C17855:1..942	gap2	ATCEA4S15390, ATCEA4C10897_1, ATCEA4S10883	95, 92, 88	ATL8C17855:81..731	0.99	g2865623	77	1018		(AF045286) GDP-4-keto-6-deoxy-D-mannose-3,5-epimerase-4-reductase [Arabidopsis thaliana]
151261	ATU013201	ATL8S21752:553..247	gap2	ATCEA4S7201	95	ATL8S21752:527..257	0.95	g1362106	77	192	8.0e-15	GUT 7-2a protein - common tobacco

												(fragment) []
151262	ATU013202	ATL8C24772:3359..1715	gap2	ATCEA4C83445_1	95	ATL8C24772:3356..1890	0.79	g3281853	77	731	1.6e-63	(AL031004) putative protein [Arabidopsis thaliana]
151263	ATU013203	ATL8C43013:1783..1	gap2	ATCEA4C24924_1, ATCEA4S5474, ATCEA4C116496_1, ATCEA4S14039	95, 91, 90, 84			g4587529	77	905	7.2e-88	(AC007060) Strong similarity to F19I3.2 []
151264	ATU013204	ATL8C15554:1453..1	gap2	ATCEA4S10953	95			g2191134	77	936	2.6e-58	(AF007269) contains weak similarity to Galectin-3 binding protein [Arabidopsis thaliana]
151265	ATU013205	ATL8C2469:1196..70	gap2	ATCEA4C38854_1	95	ATL8C2469:1060..70	0.86	g4512685	76	315	1.9e-35	(AC006931) hypothetical

												protein [Arabidopsis thaliana]
151266	ATU013206	ATL8C43364:546..3323	gap2	ATCEA4C20784_1, ATCEA4S23189	95, 83	ATL8C43364:546..3243	0.85	g3335333	76	869		(AC004512) Similar to chloroplast membrane-associated 30KD protein precursor (IM30) gb|M73744 from Pisum sativum. ESTs gb|N37557, gb|W43887 and gb|AA042479 come from this gene. [Arabidopsis thaliana]
151267	ATU013	ATL8C2	gap2	ATCEA4	95	ATL8C2	0.81	g35401	76	668	1.4e-	(AC004

	207	0737:99..1508		C14109_1		0737:1438..449		81			58	122) Unknown protein [Arabidopsis thaliana]
151268	ATU013208	ATL8C1546:199..1383	gap2	ATCEA4C29645_1	95	ATL8C1546:356..1183	0.61	g4056506	76	1243	4.5e-138	(AC005896) nodulin-like protein [Arabidopsis thaliana]
151269	ATU013209	ATL8C34207:1..3201	gap2	ATCEA4C63709_1, ATCEA4C7012_1, ATCEA4C21237_1	95, 92, 92	ATL8C34207:7..3089	0.76	g3176690	75	3650	0.0	(AC003671) Similar to ubiquitin ligase gb|D63905 from S. cerevisiae. EST gb|R65295 comes from this gene. [Arabidopsis thaliana]
151270	ATU013210	ATL8C24340:1	gap2	ATCEA4S3163,	95, 94, 84	ATL8C24340:1	0.56	g2459415	75	2117	1.6e-201	(AC002332)

		581..1		ATCEA4S24868, ATCEA4S6335		368..224						hypothetical protein [Arabidopsis thaliana]
151271	ATU013211	ATL8C44798:603..1587	gap2	ATCEA4S10691	95	ATL8C44798:644..1481	0.51	g3176665	75	392	8.9e-33	(AC004393) T1F15.9 [Arabidopsis thaliana]
151272	ATU013212	ATL8C11183:2475..1142	gap2	ATCEA4S1826	95			g2191135	75	223	2.3e-15	(AF007269) A_IG002N01.14 gene product [Arabidopsis thaliana]
151273	ATU013213	ATL8C21137:19..455	gap2	ATCEA4S10285, ATCEA4S10624	95, 84	ATL8C21137:232..448	0.94	g2245032	74	134	2.8e-13	(Z97342) gibberellin oxidase homolog [Arabidopsis thaliana]
151274	ATU013214	ATL8C25172:868..357	gap2	ATCEA4S13301	95	ATL8C25172:853..435	0.85	g2829926	74	319	7.3e-28	(AC002291) Hypothetical protein

												[Arabidopsis thaliana]
151275	ATU013215	ATL8C1488:1902..1	gap2	ATCEA4C76839_1	95	ATL8C1488:1822..201	0.53	g465740, g2244904	74, 41	54, 84	2.0e-06, 5.2e-13	HYPOTHETICAL 54.9 KD PROTEIN C02F5.7 IN CHROMOSOME III [Caenorhabditis elegans]; (Z97339) similar to hypothetical protein C02F5.7 - Caenorha [Arabidopsis thaliana]
151276	ATU013216	ATL8C31943:1499..1	gap2	ATCEA4S2913	95	ATL8C31943:1418..105	0.96	g4582435	73	774	1.6e-81	(AC007196) putative selenium-binding protei

												n [Arabidopsis thaliana]
151277	ATU013217	ATL8C47967:152..924	gap2	ATCEA4S36297, ATCEA4S29235, ATCEA4S36298	95, 86, 82	ATL8C47967:152..835	0.82	g1362019	73	517	2.3e-34	zinc finger protein 6 - Arabidopsis thaliana [Arabidopsis thaliana]
151278	ATU013218	ATL8C7939:1629..1	gap2	ATCEA4S2766	95	ATL8C7939:1528..151	0.80	g3402672	73	1495	2.1e-143	(AC004697) putative white protein [Arabidopsis thaliana]
151279	ATU013219	ATL8C37834:3998..621	gap2	ATCEA4S26920, ATCEA4C47533_1, ATCEA4S11614, ATCEA4S32992, ATCEA4C47533_2, ATCEA4C11476	95, 93, 93, 89, 87, 86	ATL8C37834:3998..746	0.77	g2842757	73	338	1.7e-07	LIGHT-INDUCIBLE PROTEIN CPRF-2 [Petroselinum crispum]

				3_1								
151280	ATU013220	ATL8C35141:157..833	gap2	ATCEA4C100931_1	95	ATL8C35141:509..829	0.52	g2129956	73	281	4.0e-30	photoassimilate-responsive protein PAR-1c precursor - common tobacco [Nicotiana tabacum]
151281	ATU013221	ATL8C7804:1164..1	gap2	ATCEA4C45546_1	95			g4490292	73	534	1.8e-42	(AL035678) putative protein [Arabidopsis thaliana]
151282	ATU013222	ATL8C26008:1..2143	gap2	ATCEA4C1984_1	95	ATL8C26008:78..1965	0.93	g2146732	72	1622	1.2e-144	FK506-binding protein - Arabidopsis thaliana [Arabidopsis thaliana]
151283	ATU013223	ATL8C33268:547..1133	gap2	ATCEA4S32133	95	ATL8C33268:547..960	0.92	g3980387	72	323	3.1e-32	(AC004561) putative

												glutathione S-transferase [Arabidopsis thaliana]
151284	ATU013224	ATL8C17486:1429..1	gap2	ATCEA4S13976	95	ATL8C17486:1308..179	0.66	g3763923	71	361	4.4e-35	(AC004450) hypothetical protein [Arabidopsis thaliana]
151285	ATU013225	ATL8C8476:3045..709	gap2	ATCEA4C129307_1, ATCEA4S29128	95, 84	ATL8C8476:2634..1222	0.66	g4895186	71	1819	5.2e-191	(AC007661) putative growth regulator protein [Arabidopsis thaliana]
151286	ATU013226	ATL8C23918:6971..5563	gap2	ATCEA4C7576_1, ATCEA4C7576_2, ATCEA4S20078	95, 86, 84			g2244997	71	484	3.0e-36	(Z97341) unnamed protein product [Arabidopsis thaliana]
151287	ATU013	ATL8C3	gap2	ATCEA4	95	ATL8C3	0.92	g11706	70	250	2.5e-	SERINE

	227	6096:3170..1		C28369_1		6096:3170..358		89			14	/THREONINE-PROTEIN KINASE ATPK1/ATPK6 [Arabidopsis thaliana]
151288	ATU013228	ATL8C44065:1342..3332	gap2	ATCEA4C27777_1	95	ATL8C44065:1713..3243	0.70	g3176711	70	1211	1.2e-85	(AC002392) bZIP-like protein [Arabidopsis thaliana]
151289	ATU013229	ATL8S24158:527..138	gap2	ATCEA4C4145_1	95	ATL8S24158:373..192	0.94	g3859591	69	167	3.1e-14	(AF104919) No definition line found [Arabidopsis thaliana]
151290	ATU013230	ATL8C23691:2428..1438	gap2	ATCEA4C68449_1, ATCEA4C65331_1	95, 82	ATL8C23691:2320..2225	0.88	g2801448	69	156	7.3e-13	(AF028341) ubiquitin-conjugating enzyme 18 [Arabidopsis thaliana]
151291	ATU013	ATL8C4	gap2	ATCEA4	95,	ATL8C4	0.79	g38343	69	277	2.6e-	(AC005

	231	6695:47..1415		S33571, ATCEA4S31189, ATCEA4S34093, ATCEA4C15103_1	92, 91, 83	6695:318..969		10			33	679) Similar to Ubiquitin-conjugating enzyme E2-17 KD gb|D83004 from Homo sapiens. ESTs gb|T88233, gb|Z24464, gb|N37265, gb|H36151, gb|Z34711, gb|AA040983, and gb|T22122 come from this gene. [Arabidopsis thaliana]
151292	ATU013232	ATL8C17631:1..2440	gap2	ATCEA4C41691_1, ATCEA4S36016	95, 94	ATL8C17631:660..2160	0.78	g2062164	69	855	7.8e-91	(AC001645) jasmonate induci

												ble protein isolog [Arabidopsis thaliana]
151293	ATU013233	ATL8C25296:23..1800	gap2	ATCEA4C3376_1, ATCEA4S191	95, 94	ATL8C25296:86..1692	0.96	g3786001	68	517	2.4e-52	(AC005499) unknown protein [Arabidopsis thaliana]
151294	ATU013234	ATL8C47269:1226..1	gap2	ATCEA4S34196	95	ATL8C47269:1147..549	0.93	g3641838	68	771	4.9e-78	(AL023094) putative protein (fragment) [Arabidopsis thaliana]
151295	ATU013235	ATL8C25114:6115..2407	gap2	ATCEA4C2967_2, ATCEA4C83054_1, ATCEA4S30043, ATCEA4C2967_1	95, 95, 89, 88	ATL8C25114:6062..3369	0.86	g4432814	68	182	2.2e-08	(AC006593) unknown protein [Arabidopsis thaliana]
151296	ATU013236	ATL8C26479:1365..1	gap2	ATCEA4C13979_1	95	ATL8C26479:1153..4	0.97	g4006848	67	573	2.1e-63	(AJ131433) seleno

						5						cysteine methyltransferase [Astragalus bisulcatus]
151297	ATU013237	ATL8C32161:1551..715	gap2	ATCEA4S680	95	ATL8C32161:1495..715	0.84	g3859595	67	597	2.5e-37	(AF104919) No definition line found [Arabidopsis thaliana]
151298	ATU013238	ATL8C10487:918..1	gap2	ATCEA4S6324	95	ATL8C10487:867..189	0.78	g3929375	67	101		PUTATIVE SPLICING FACTOR, ARGININE/SERINE-RICH 2 (SPLICING FACTOR SC35) (SC-35) (SPLICING COMPONENT, 35 KD) [Caenorhabditis elegan

												s]
151299	ATU013239	ATL8C9992:885..1	gap2	ATCEA4S6794	95	ATL8C9992:885..28	0.78	g3445210	67	1215	4.1e-115	(AC004786) putative flavonol 3-o-glucosyltransferase [Arabidopsis thaliana]
151300	ATU013240	ATL8C50209:1..1299	gap2	ATCEA4S34570, ATCEA4C149678_1	95, 93	ATL8C50209:209..1214	0.70	g4006872	67	590	4.1e-48	(Z99707) methionyl aminopeptidase-like protein [Arabidopsis thaliana]
151301	ATU013241	ATL8C2822:1503..1	gap2	ATCEA4S4616	95	ATL8C2822:1498..49	0.70	g4584542	67	2075	5.6e-186	(AL049608) putative protein [Arabidopsis thaliana]
151302	ATU013242	ATL8C25425:1..936	gap2	ATCEA4C5902_4, ATCEA4S35514	95, 83, 82	ATL8C25425:277..725	0.95	g2496731	66	493	7.1e-52	HYPOTHETICAL 30.2 KD PROTEI

				, ATCEA4 S25608								N Y4OV [Rhizobium sp. NGR234]
151303	ATU013243	ATL8C44501:1852..1	gap2	ATCEA4 S29938	95	ATL8C44501:1849..14	0.71	g3935140, g1946364	66, 49	279, 989	4.3e-24, 1.2e-101	(AC005106) T25N20.4 [Arabidopsis thaliana]; (U93215) lipase isolog [Arabidopsis thaliana]
151304	ATU013244	ATL8C36330:1623..1	gap2	ATCEA4 S1321, ATCEA4 C101106_1, ATCEA4 S24662, ATCEA4 S8150	95, 95, 86, 85	ATL8C36330:1564..527	0.66	g3287693	66	1441	1.1e-152	(AC003979) Similar to LIM17 gene product gb|1653769 from the genome of Synechocystis sp. gb|D90916. [Arabidopsis thaliana]

151305	ATU013245	ATL8C2049:1..961	gap2	ATCEA4C24_1, ATCEA4C24_2	95, 85	ATL8C2049:81..179	0.64	g2801769	66	486	2.6e-51	(AF042330) rac-like small GTP binding protein [Brassica rapa]
151306	ATU013246	ATL8C31558:1..1193	gap2	ATCEA4C34877_1	95	ATL8C31558:361..860	0.44	g1620896	66	417	4.9e-31	(D87956) protein involved in sexual development [Schizosaccharomyces pombe]
151307	ATU013247	ATL8C31983:490..1847	gap2	ATCEA4C25016_2, ATCEA4S32173, ATCEA4S16703	95, 94, 90			g2760839	66	687	6.6e-60	(AC003105) putative receptor kinase [Arabidopsis thaliana]
151308	ATU013248	ATL8C10267:827..2445	gap2	ATCEA4S1714, ATCEA4S6553	95, 94	ATL8C10267:979..2178	0.75	g2529671, g3080353, g4512670	65, 58, 49	309, 130, 107	2.5e-08	(AC002535) hypothetical protein [Arabi

												dopsis thaliana]; (AL022580) cytochrome P450 [Arabidopsis thaliana]; (AC006931) putative cytochrome P450 [Arabidopsis thaliana]
151309	ATU013249	ATL8C3059:1..688	gap2	ATCEA4C1342_1	95	ATL8C3059:201..513	0.75	g1041708	65	806	2.3e-84	(U30481) expansin At-EXP2 [Arabidopsis thaliana]
151310	ATU013250	ATL8C41337:703..169	gap2	ATCEA4S10913	95	ATL8C41337:627..179	0.70	g2088655	65	622	3.8e-25	(AF002109) hypothetical protein [Arabidopsis thaliana]
151311	ATU013251	ATL8C4983:1..3056	gap2	ATCEA4C22543_1	95	ATL8C4983:134..289	0.68	g4914343	65	1483	2.7e-127	(AC005489) F14N23

						8						.29 [Arabidopsis thaliana]
151312	ATU013252	ATL8C43650:1..8541	gap2	ATCEA4S12828, ATCEA4S321, ATCEA4S203	95, 94, 85	ATL8C43650:8066..7012, ATL8C43650:223..6715	0.62, 0.61	g4432802, g3377816	65, 47	2685, 1825		(AC006437) putative pol polyprotein, 5' partial [Arabidopsis thaliana]; (AF076275) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
151313	ATU013253	ATL8C32790:1514..1	gap2	ATCEA4S36342	95	ATL8C32790:1210..267	0.41	g3719215	65	480	2.0e-31	(AF005158) MADS-box Protein

												[Arabidopsis thaliana]
151314	ATU013254	ATL8C33745:1..1196	gap2	ATCEA4S1271	95	ATL8C33745:294..1095	0.85	g4455208	64	948	9.0e-101	(AL035440) putative protein [Arabidopsis thaliana]
151315	ATU013255	ATL8C40536:959..1	gap2	ATCEA4C64468_1	95	ATL8C40536:626..117	0.82	g1931639	64	350	1.8e-31	(U95973) lysophospholipase isolog [Arabidopsis thaliana]
151316	ATU013256	ATL8C49514:1731..653	gap2	ATCEA4C75619_1, ATCEA4C57341_1	95, 87	ATL8C49514:1644..904	0.81	g1703220	64	204	1.4e-20	AIG2 PROTEIN [Arabidopsis thaliana]
151317	ATU013257	ATL8C40568:1..663	gap2	ATCEA4C11739_1	95	ATL8C40568:93..209	0.71	g2980804	64	689	1.7e-64	(AL022197) hypothetical protein [Arabidopsis thaliana]
151318	ATU013258	ATL8C38746:1..1398	gap2	ATCEA4S11854	95	ATL8C38746:156..13	0.69	g3047082	64	776	3.0e-71	(AF058914) simila

						98						r to Vigna radiata pectin acetyl esterase precursor (GB:X99348) [Arabidopsis thaliana]
151319	ATU013259	ATL8C23296:1..703	gap2	ATCEA4C2956_1	95	ATL8C23296:100..700	0.51	g3157930	64	921	2.5e-87	(AC002131) Strong similarity to amino-cyclopropane-carboxylic acid oxidase gb|L27664 from Brassica napus. ESTs gb|Z48548 and gb|Z48549 come from

												this gene. [Arabidopsis thaliana]
151320	ATU013260	ATL8C3350:1..1797	gap2	ATCEA4C123094_1, ATCEA4S32477	95, 92			g2244817	64	2001	6.9e-138	(Z97336) disease resistance protein RPS2 homolog [Arabidopsis thaliana]
151321	ATU013261	ATL8C38694:1334..1	gap2	ATCEA4C77141_1	95	ATL8C38694:1232..188	0.87	g2842478	63	1083	3.2e-110	(AL021749) receptor protein kinase like protein [Arabidopsis thaliana]
151322	ATU013262	ATL8C3136:1..1093	gap2	ATCEA4S2725	95	ATL8C3136:53..950	0.86	g4914379	63	665	5.0e-52	(AC007584) hypothetical protein [Arabidopsis thaliana]
151323	ATU013	ATL8C1	gap2	ATCEA4	95,	ATL8C1	0.68	g45103	63	447	2.1e-	(AC006

	263	4184:988..1		C14396_1, ATCEA4C18682_1, ATCEA4C96285_1	95, 94	4184:851..197		96			28	587) hypothetical protein [Arabidopsis thaliana]
151324	ATU013264	ATL8C32013:126..689	gap2	ATCEA4S33945, ATCEA4C21824_1, ATCEA4C21824_2	95, 94, 91	ATL8C32013:231..660	0.65	g4454466	63	270	2.0e-19	(AC006234) unknown protein [Arabidopsis thaliana]
151325	ATU013265	ATL8C32147:2965..1806	gap2	ATCEA4C1077_1, ATCEA4S33107	95, 84			g3004558	63	923	6.5e-97	(AC003673) peroxidase ATP22a [Arabidopsis thaliana]
151326	ATU013266	ATL8C36701:1648..670	gap2	ATCEA4C4684_1	95	ATL8C36701:1282..790	0.93	g1769968	62	380	7.2e-32	(Y10156) myrosinase-associated protein [Brassica napus]
151327	ATU013267	ATL8C38400:1410..183	gap2	ATCEA4C52315_1	95	ATL8C38400:1382..183	0.87	g3426039	62	1049	4.5e-113	(AC005168) unknown protein

												[Arabidopsis thaliana]
151328	ATU013268	ATL8C48896:1077..79	gap2	ATCEA4S3165	95	ATL8C48896:1077..79	0.74	g2578818	62	111	7.9e-07	(AB000121) TBPIP [Mus musculus]
151329	ATU013269	ATL8C3732:1332..74	gap2	ATCEA4C26747_1	95	ATL8C3732:1331..227	0.71	g2795805	62	816	2.5e-71	(AC003674) putative protein kinase [Arabidopsis thaliana]
151330	ATU013270	ATL8C3465:713..3056	gap2	ATCEA4C21094_1	95			g4115386	62	440	7.2e-30	(AC005967) unknown protein [Arabidopsis thaliana]
151331	ATU013271	ATL8C5885:1..1729	gap2	ATCEA4C864_1	95	ATL8C5885:87..1513	0.93	g2129627	61	1814		K+-channel - Arabidopsis thaliana [Arabidopsis thaliana]
151332	ATU013272	ATL8S13989:1	gap2	ATCEA4S31749	95	ATL8S13989:1	0.93	g1220180	61	89	8.6e-11	(Z69996)

		..459				04..351						dormancy related protein [Trollius ledebourii]
151333	ATU013273	ATL8C3253:1..780	gap2	ATCEA4C127417_1	95			g2980788	61	1264	3.7e-128	(AL022197) putative protein [Arabidopsis thaliana]
151334	ATU013274	ATL8C9086:1..1070	gap2	ATCEA4C68194_1, ATCEA4S12577	95, 90			g3243274	61	661		(AF072134) TCP3 [Arabidopsis thaliana]
151335	ATU013275	ATL8C45338:1..2185	gap2	ATCEA4C117911_1, ATCEA4S1306	95, 82	ATL8C45338:49..2015	0.97	g2315362	60	946	5.4e-69	(AF016441) contains similarity to multiple TPR domains [Caenorhabditis elegans]
151336	ATU013276	ATL8C19551:1	gap2	ATCEA4S26628	95	ATL8C19551:1	0.82	g2832680	60	950	3.7e-91	(AL021712)

		01..3085				01..1613						putative protein [Arabidopsis thaliana]
151337	ATU013277	ATL8C182:4125..3143	gap2	ATCEA4C70471_2	95			g2829889	60	155		(AC002396) Hypothetical protein [Arabidopsis thaliana]
151338	ATU013278	ATL8C36099:1..2159	gap2	ATCEA4S3206	95			g3763935	60	361	2.0e-45	(AC004450) putative myb-related transcription factor [Arabidopsis thaliana]
151339	ATU013279	ATL8C32992:1093..130	gap2	ATCEA4C8303_1	95	ATL8C32992:984..318	0.93	g2911050	59	475	5.7e-49	(AL021961) putative protein [Arabidopsis thaliana]
151340	ATU013280	ATL8C248:157	gap2	ATCEA4S1646	95	ATL8C248:117	0.77, 0.91	g4741197	59	1006	3.2e-104	(AL049746)

		7..117				..419, ATL8C2 48:127 4..830						aldose 1-epimer ase-like protei n [Arabi dopsis thalia na]
151341	ATU013 281	ATL8C3 8039:1 771..1	gap2	ATCEA4 C41112 _1, ATCEA4 C12063 3_1, ATCEA4 C58557 _1, ATCEA4 S29219	95, 94, 85, 83	ATL8C3 8039:1 543..3 17	0.76	g45393 35	59	1062	8.6e-108	(AL035 539) putati ve protei n [Arabi dopsis thalia na]
151342	ATU013 282	ATL8C2 2267:4 093..1	gap2	ATCEA4 S150	95	ATL8C2 2267:4 093..2 2	0.64	g42638 25	59	2468	8.9e-251	(AC006 067) hypoth etical protei n [Arabi dopsis thalia na]
151343	ATU013 283	ATL8C2 5917:1 030..2 130	gap2	ATCEA4 S31335	95	ATL8C2 5917:1 125..2 129	0.51	g45864 01	59	413	2.5e-40	(D8820 8) hSgt1p [Homo sapien s]
151344	ATU013 284	ATL8C3 6107:9 79..1	gap2	ATCEA4 C270_1 , ATCEA4 S25865	95, 90			g11748 44	59	362	1.9e-30	UBIQUI TIN-CONJUG ATING ENZYME E2-17 KD 2

												(UBIQUITIN-PROTEIN LIGASE 2) (UBIQUITIN CARRIER PROTEIN 2) [Arabidopsis thaliana]
151345	ATU013285	ATL8C19334:1105..1	gap2	ATCEA4S35489, ATCEA4C116707_1	95, 94	ATL8C19334:1000..30	0.90	g2494162, g4914337	58, 37	221, 96	2.8e-17, 1.2e-05	HYPOTHETICAL 39.9 KD PROTEIN T15H9.1 IN CHROMOSOME II PRECURSOR [Caenorhabditis elegans]; (AC005489) F14N23.23 [Arabidopsis thaliana]
151346	ATU013286	ATL8C42381:283..23	gap2	ATCEA4C356191,	95, 91	ATL8C42381:283..21	0.74	g4758876	58	229	1.8e-11	poly(A)-bindin

		34		ATCEA4S13413		64						g protein 2 [Homo sapiens]
151347	ATU013287	ATL8C47659:1995..544	gap2	ATCEA4S26035, ATCEA4C100042_1	95, 94	ATL8C47659:1937..745	0.73	g4886307	58	927	2.7e-72	(AJ242588) 1-deoxy-d-xylulose-5-phosphate reductoisomerase [Arabidopsis thaliana]
151348	ATU013288	ATL8C44207:1..555	gap2	ATCEA4C54193_1, ATCEA4S32312	95, 85	ATL8C44207:555..102	0.72	g4335745	58	599	3.5e-55	(AC006284) putative hydrolase (contains an esterase/lipase/thioesterase active site serine domain (prosite: PS50187) [Arabidopsis

												thaliana]
151349	ATU013289	ATL8C22490:1..1200	gap2	ATCEA4S35238, ATCEA4S31238	95, 85	ATL8C22490:273..1098	0.71	g11727704	58	1580	3.8e-163	PEPTIDE TRANSPORTER PTR2-B (HISTIDINE TRANSPORTING PROTEIN) [Arabidopsis thaliana]
151350	ATU013290	ATL8C8276:1083..1	gap2	ATCEA4C16980_1	95	ATL8C8276:1063..281	0.68	g4584535	58	507	2.8e-24	(AL049608) putative protein [Arabidopsis thaliana]
151351	ATU013291	ATL8C35293:5554..730	gap2	ATCEA4S2599, ATCEA4S34044, ATCEA4C74290_1, ATCEA4S31353, ATCEA4S29225, ATCEA4S868	95, 93, 93, 90, 83, 82	ATL8C35293:5342..1224	0.66	g4375833, g4587513	58, 55	1027, 905	1.3e-100, 6.7e-96	(AL021713) receptor serine/threonine kinase-like protein [Arabidopsis thaliana]; (AC007060) Contai

												ns eukaryotic protein kinase domain PF|00069. [Arabidopsis thaliana]
151352	ATU0132 92	ATL8C14797:1142..1412	gap2	ATCEA4C38669_1	95			g421969	58	193	1.8e-13	ribulose-bisphosphate carboxylase (EC 4.1.1.39) large chain - coffee chloroplast (fragment) [Coffea arabica]
151353	ATU0132 93	ATL8C9276:965..1	gap2	ATCEA4C27115_2, ATCEA4S13137	95, 84	ATL8C9276:935..133	0.88	g4584257	57	436		(Y18472) SINA2p [Vitis vinifera]
151354	ATU0132 94	ATL8S1768:1..487	gap2	ATCEA4S15403	95	ATL8S1768:227..391	0.88	g4538945	57	219	9.7e-20	(AL049483) putative thiore

												doxin [Arabidopsis thaliana]
151355	ATU013295	ATL8C9140:202..1148	gap2	ATCEA4S6137	95	ATL8C9140:252..943	0.61	g4586038	57	886		(AC007109) putative heat shock protein [Arabidopsis thaliana]
151356	ATU013296	ATL8C43072:1716..950	gap2	ATCEA4S9369, ATCEA4C58901_1	95, 82			g3426051	57	258	1.9e-18	(AC005168) hypothetical protein [Arabidopsis thaliana]
151357	ATU013297	ATL8C44622:469..66	gap2	ATCEA4C29217_1	95			g4204289	57	200	2.0e-19	(AC003027) lcl|prt_seq No definition line found [Arabidopsis thaliana]
151358	ATU013298	ATL8C14783:1804..1155	gap2	ATCEA4C3106_2	95			g133960	57	423	2.3e-37	CHLOROPLAST 30S RIBOSOMAL

												PROTEIN S4 [Nicotiana tabacum]
151359	ATU013299	ATL8C7457:1362..1	gap2	ATCEA4S27433, ATCEA4C50293_1	95, 95	ATL8C7457:1027..125	0.92	g3668080	56	818	4.2e-41	(AC004667) unknown protein [Arabidopsis thaliana]
151360	ATU013300	ATL8C29313:1713..1	gap2	ATCEA4S6948	95	ATL8C29313:1411..114	0.90	g4006920	56	1094	2.7e-94	(Z99708) actin interacting protein [Arabidopsis thaliana]
151361	ATU013301	ATL8C20405:1..1081	gap2	ATCEA4C57485_1	95	ATL8C20405:295..699	0.88	g1857837	56	83	0.00053	(U88418) oocyte maturation factor Mos [Phaethon rubricauda]
151362	ATU013302	ATL8C8571:3202..185	gap2	ATCEA4C30977_1, ATCEA4C123282_1	95, 93	ATL8C8571:2779..185	0.68	g2961356	56	367	2.8e-17	(AL022140) alcohol dehydrogenase like

												protein [Arabidopsis thaliana]
151363	ATU013303	ATL8C27996:1102..1	gap2	ATCEA4C73783_1	95	ATL8C27996:909..52	0.61	g3540181	56	448		(AC004122) Unknown protein [Arabidopsis thaliana]
151364	ATU013304	ATL8C23412:3524..3208	gap2	ATCEA4C17357_1	95			g2275216	56	175	3.0e-11	(AC002337) cytochrome c oxidase Vc subunit isolog [Arabidopsis thaliana]
151365	ATU013305	ATL8S1903:1..588	gap2	ATCEA4C12600_2, ATCEA4C12600_3	95, 95	ATL8S1903:83..357	0.88	g4678226	55	269	4.3e-13	(AC007135) putative 40S ribosomal protein S14 [Arabidopsis thaliana]
151366	ATU013306	ATL8C35907:1283..7494	gap2	ATCEA4S253	95	ATL8C35907:1283..7151	0.86	g3252818	55	4277	0.0	(AC004705) hypothetical

												protein [Arabidopsis thaliana]
151367	ATU013307	ATL8C43258:2376..878	gap2	ATCEA4C72425_1	95	ATL8C43258:2020..1069	0.80	g2213587	55	1139	2.9e-113	(AC000348) T7N9.7 [Arabidopsis thaliana]
151368	ATU013308	ATL8C31003:3872..2406	gap2	ATCEA4S1047	95	ATL8C31003:3621..2406	0.68	g4581205	55	1682	5.9e-153	(Y17913) cyclic nucleotide and calmodulin-regulated ion channel [Arabidopsis thaliana]
151369	ATU013309	ATL8C12034:2245..4601	gap2	ATCEA4S1847	95			g2257503	55	138	1.5e-05	(AB004535) BEM46 PROTEIN [Schizosaccharomyces pombe]
151370	ATU013310	ATL8C42948:1..1856	gap2	ATCEA4C32192_1, ATCEA4S23108	95, 88, 87			g2827706	55	252	6.3e-11	(AL021684) predicted protei

				, ATCEA4 C45936 _1								n [Arabi dopsis thalia na]
151371	ATU013 311	ATL8C2 1058:6 55..1	gap2	ATCEA4 S35955 , ATCEA4 C10270 1_1	95, 90	ATL8C2 1058:6 55..91	0.98	g45804 55	54	749	1.5e-70	(AC006 081) unknow n protei n [Arabi dopsis thalia na]
151372	ATU013 312	ATL8C1 267:1. .3256	gap2	ATCEA4 C92374 _1	95	ATL8C1 267:31 0..311 3	0.91	g31766 62	54	2000	2.0e-173	(AC004 393) Simila r to mannos yl-oligos acchar ide glucos idase gb|X87 237 from Homo sapien s. [Arabi dopsis thalia na]
151373	ATU013 313	ATL8C2 5067:7 38..1	gap2	ATCEA4 C44555 _2	95	ATL8C2 5067:6 85..97	0.75	g25985 89	54	621	6.1e-45	(Y1536 7) MtN19 [Medic ago trunca tula]
151374	ATU013 314	ATL8C1 0885:3	gap2	ATCEA4 C33178	95, 88, 84	ATL8C1 0885:3	0.68	g47592 80	54	1296	1.9e-176	U5 snRNP-

		825..970		_1, ATCEA4S1996, ATCEA4S9061		770..1285						specific protein, 116 kD [Homo sapiens]
151375	ATU013315	ATL8C1656:798..1	gap2	ATCEA4C14660_1	95	ATL8C1656:660..134	0.51	g4587547	54	399	1.5e-33	(AC006577) Contains similarity to DNA-binding protein Gt-2 gb|X68261 from Oryza sativa. [Arabidopsis thaliana]
151376	ATU013316	ATL8C9727:4020..400	gap2	ATCEA4S34936	95	ATL8C9727:3717..400	0.51	g4056437	54	575	3.3e-50	(AC005990) Strong similarity to PFAM PF|00069 Eukaryotic protein kinase domain

												. [Arabidopsis thaliana]
151377	ATU013317	ATL8C35435:1454..1	gap2	ATCEA4C35806_1	95	ATL8C35435:1333..19	0.42	g3157945	54	1314	7.4e-131	(AC002131) Contains similarity to axi 1 gene gb|X80301 from Nicotiana tabacum. [Arabidopsis thaliana]
151378	ATU013318	ATL8C41921:549..2451	gap2	ATCEA4C29565_1, ATCEA4S21222	95, 82			g1184077	54	843	3.3e-74	(U42445) Cf-2.2 [Lycopersicon pimpinellifolium]
151379	ATU013319	ATL8C11197:297..1	gap2	ATCEA4S8148	95			g1711507	54	191	1.6e-16	SIGNAL RECOGNITION PARTICLE 19 KD PROTEIN (SRP19) [Oryza sativa

												]
151380	ATU013320	ATL8C32989:468..1	gap2	ATCEA4S1688	95			g4585996	54	232	8.4e-24	(AC005287) Hypothetical protein [Arabidopsis thaliana]
151381	ATU013321	ATL8C36957:1730..1	gap2	ATCEA4C132375_1, ATCEA4S35188	95, 83			g4490753	54	238	6.0e-09	(AL035708) putative protein [Arabidopsis thaliana]
151382	ATU013322	ATL8C20598:1..1091	gap2	ATCEA4S23197	95			g1305531	54	208	4.9e-18	(U55219) defective chloroplasts and leaves; required for chloroplast development and palisade cell differentiation in leaves [Solan

												um lycopersicum]
151383	ATU013323	ATL8C37364:1657..1	gap2	ATCEA4C566_1, ATCEA4C566_3, ATCEA4C566_2, ATCEA4S3047	95, 92, 86, 85			g1103318	54	1040		(X78818) casein kinase I [Arabidopsis thaliana]
151384	ATU013324	ATL8C22757:1..737	gap2	ATCEA4S4741	95	ATL8C22757:164..730	0.98	g3924824	53	285	0.068	(Z83113) cDNA EST yk370a12.5 comes from this gene; cDNA EST EMBL:D37429 comes from this gene; cDNA EST EMBL:D34381 comes from this gene; cDNA EST yk370a12.3

												comes from this gene [Caenorhabditis elegans]
151385	ATU013325	ATL8C8300:1..860	gap2	ATCEA4S34704, ATCEA4C70168_1, ATCEA4S1370	95, 92, 88	ATL8C8300:61..404	0.86	g282995	53	131	2.6e-09	seed protein B32E - barley (fragment) [Hordeum vulgare]
151386	ATU013326	ATL8C12845:1225..1	gap2	ATCEA4S34141, ATCEA4S26881	95, 85	ATL8C12845:906..39	0.85	g4539423	53	804	1.3e-69	(AL049171) pyrophosphate-dependent phosphofructo-1-kinase [Arabidopsis thaliana]
151387	ATU013327	ATL8C13699:1..976	gap2	ATCEA4S35941	95	ATL8C13699:70..725	0.83	g3080353	53	585	1.3e-59	(AL022580) cytochrome P450 [Arabidopsis thaliana]
151388	ATU013	ATL8C3	gap2	ATCEA4	95	ATL8C3	0.82	g39804	53	906	4.2e-	(AC004

	328	3130:196..1873		C484_3		3130:1732..1613		10			83	561) putative receptor-like protein kinase [Arabidopsis thaliana]
151389	ATU013329	ATL8C34585:1..1160	gap2	ATCEA4S14009, ATCEA4S2358	95, 91	ATL8C34585:126..716	0.80	g2501423	53	914	6.9e-102	TUBULIN GAMMA CHAIN [Zea mays]
151390	ATU013330	ATL8C4088:1749..1	gap2	ATCEA4C911_1, ATCEA4C911_2	95, 86	ATL8C4088:1457..194	0.72	g4204947	53	761	2.3e-58	(U60135) serine/threonine protein phosphatase 2A-3 catalytic subunit [Arabidopsis thaliana]
151391	ATU013331	ATL8C2515:513..1	gap2	ATCEA4C4309_2, ATCEA4S31231	95, 90	ATL8C2515:471..357	0.68	g3236246	53	520	8.8e-51	(AC004684) putative expansin protein

												[Arabidopsis thaliana]
151392	ATU013332	ATL8C27918:517..1	gap2	ATCEA4C1861_1	95	ATL8C27918:259..46	0.56	g1155068	53	662		(X94976) cell wall-plasma membrane linker protein [Brassica napus]
151393	ATU013333	ATL8C14431:938..1	gap2	ATCEA4S1903	95	ATL8C14431:603..53	0.41	g3036798	53	175	4.1e-27	(AL022373) putative protein [Arabidopsis thaliana]
151394	ATU013334	ATL8C30801:672..137	gap2	ATCEA4S10697	95	ATL8C30801:497..137	0.83	g466158	52	61	8.7e-05	HYPOTHETICAL 9.3 KD PROTEIN ZK652.1 IN CHROMOSOME III [Caenorhabditis elegans]
151395	ATU013335	ATL8C39874:1..1861	gap2	ATCEA4S32628	95	ATL8C39874:73..174	0.80	g4544371	52	385	2.8e-24	(AC006920) hypoth

						9						etical protein [Arabidopsis thaliana]
151396	ATU013336	ATL8C12712:329..2003	gap2	ATCEA4C5807_1	95	ATL8C12712:491..1333	0.47	g1652856	52	174	2.5e-11	(D90909) hypothetical protein [Synechocystis sp.]
151397	ATU013337	ATL8C17658:1..2765	gap2	ATCEA4S30112	95			g3250676, g2739371	52, 44	276, 1041	3.7e-28, 3.3e-96	(AL024486) putative protein [Arabidopsis thaliana]; (AC002505) unknown protein [Arabidopsis thaliana]
151398	ATU013338	ATL8C17676:1128..1	gap2	ATCEA4C27614_1, ATCEA4C43253_1	95, 87			g2244918	52	371	6.3e-26	(Z97339) hypothetical protein [Arabidopsis

												thaliana]
151399	ATU013339	ATL8C12833:800..1	gap2	ATCEA4C1140_1	95			g4512619	52	701	1.7e-65	(AC004793) This gene is a member of the formyltransferase family PF|00551 and may be a pseudogene of gb|X74767 phosphoribosylglycinamide formyltransferase (PUR3) from Arabidopsis thaliana since our sequence differs from PUR3... [Arabi

												dopsis thaliana]
151400	ATU013340	ATL8C31085:1354..1	gap2	ATCEA4S17707	95	ATL8C31085:1354..247	0.82	g4006848	51	451	1.2e-30	(AJ131433) seleno cysteine methyl transferase [Astragalus bisulcatus]
151401	ATU013341	ATL8C49331:1..1063	gap2	ATCEA4C127565_1, ATCEA4S35590	95, 92	ATL8C49331:176..838	0.68	g4914368	51	652	1.1e-63	(AC007584) hypothetical protein similar to T18A10.3 [Arabidopsis thaliana]
151402	ATU013342	ATL8C41086:86..534	gap2	ATCEA4S13189, ATCEA4C15886_1, ATCEA4S18172	95, 89, 85			g1871577	51	144	1.8e-09	(Y11553) putative 21kD protein precursor [Medicago sativa]
151403	ATU013343	ATL8C39505:1..936	gap2	ATCEA4C34424_1	95			g4689376	51	500	1.3e-46	(AF138872) zinc

												finger protein 3 [Arabidopsis thaliana]
151404	ATU01344	ATL8C31491:47..1169	gap2	ATCEA4C19250_1, ATCEA4C41169_1, ATCEA4S27644	95, 86, 82			g4115943	51	1196	8.2e-115	(AF118223) contains similarity to eukaryotic protein kinase domains (Pfam: PF00069, score=312.6, E=4.7e-90, N=1) and EF hand domains (Pfam: PF00036, score=131, E=2.1e-35, N=4) [Arabidopsis thaliana]

151405	ATU013345	ATL8C42821:729..1	gap2	ATCEA4S8248	95			g2245102	51	1134	1.0e-115	(Z97343) hypothetical protein [Arabidopsis thaliana]
151406	ATU013346	ATL8C33253:1525..1	gap2	ATCEA4S26155, ATCEA4S34924, ATCEA4C44529_1	95, 95, 88	ATL8C33253:127..485	0.91	g4544369	50	360	9.6e-37	(AC006920) hypothetical protein [Arabidopsis thaliana]
151407	ATU013347	ATL8C6576:1379..1	gap2	ATCEA4C33415_1	95	ATL8C6576:1182..431	0.48	g1915974	50	191	4.4e-12	(U62329) fructokinase [Lycopersicon esculentum]
151408	ATU013348	ATL8C33072:1..2230	gap2	ATCEA4C23325_1	95			g4467281	50	170	2.2e-15	(AL035570) conserved hypothetical protein; may be involved in transcriptional regulation

												[Schizosaccharomyces pombe]
151409	ATU0133 49	ATL8C43 471:258..730	gap2	ATCEA4S3276, ATCEA4C224_1, ATCEA4C224_3	95, 94, 85	ATL8C43 471:332..571	1.00	g730645	49	244		40S RIBOSOMAL PROTEIN S15 [Arabidopsis thaliana]
151410	ATU0133 50	ATL8C15 976:1..568	gap2	ATCEA4S26816	95			g4314366	50	909	6.2e-80	(AC006340) hypothetical protein [Arabidopsis thaliana]
151411	ATU0133 51	ATL8C44 015:830..1	gap2	ATCEA4C43634_1	95	ATL8C44 015:754..53	0.99	g4538947	49	658	7.5e-55	(AL049483) putative mitochondrial carrier protein [Arabidopsis thaliana]
151412	ATU0133 52	ATL8S23 19:1..547	gap2	ATCEA4C27884_1, ATCEA4S27147,	95, 93, 84	ATL8S23 19:18..469	0.96	g2245125	49	212	3.6e-22	(Z97343) hypothetical protein

				ATCEA4C28427_1								[Arabidopsis thaliana]
151413	ATU013353	ATL8C20128:1525..1	gap2	ATCEA4C4706_1, ATCEA4C4706_2, ATCEA4C4706_3	95, 89, 86	ATL8C20128:1249..70	0.96	g3169883	49	729		(AF033194) dehydroquinate dehydratase/shikimate:NADP oxidoreductase [Lycopersicon esculentum]
151414	ATU013354	ATL8C22562:1..719	gap2	ATCEA4S4068, ATCEA4S36007	95, 84	ATL8C22562:52..614	0.90	g1848214	49	191	7.8e-06	(Y11210) uracil phosphoribosyltransferase [Nicotiana tabacum]
151415	ATU013355	ATL8C43543:1649..3620	gap2	ATCEA4C33680_1	95	ATL8C43543:2078..3460	0.80	g2911075	49	961		(AL021960) putative protein [Arabidopsis thaliana]
151416	ATU013	ATL8C7	gap2	ATCEA4	95, 91	ATL8C7	0.59	g37023	49	536	3.2e-	(AJ001

	356	854:301..1904		S35381, ATCEA4C557_1		854:301..1827		68			37	855) alpha subunit of F-actin capping protein [Arabidopsis thaliana]
151417	ATU013357	ATL8C1247:1328..113	gap2	ATCEA4C21437_1	95			g1723239	49	156	2.1e-09	HYPOTHETICAL 35.7 KD PROTEIN C26A3.11 IN CHROMOSOME I [Schizosaccharomyces pombe]
151418	ATU013358	ATL8C36341:1649..4827	gap2	ATCEA4C66799_1	95			g4049342	49	189	7.6e-13	(AL034567) adenylate translocator (brittle-1)-like protein [Arabidopsis thaliana]
151419	ATU013	ATL8C1	gap2	ATCEA4	95			g42636	49	607	2.1e-	(AC006

	359	600:2569..1		S26173				58			48	136) hypothetical protein [Arabidopsis thaliana]
151420	ATU013360	ATL8C38176:1..878	gap2	ATCEA4C69878_1	95			g3668091	49	272	3.0e-26	(AC004667) hypothetical protein [Arabidopsis thaliana]
151421	ATU013361	ATL8C9082:1..1101	gap2	ATCEA4C804_1	95	ATL8C9082:55..943	0.86	g585350	48	591	1.1e-35	CASEIN KINASE II, ALPHA CHAIN 2 (CK II) [Arabidopsis thaliana]
151422	ATU013362	ATL8C11636:1..924	gap2	ATCEA4S14834	95	ATL8C11636:83..581	0.85	g3915597	48	397	3.0e-41	AGAMOUS PROTEIN []
151423	ATU013363	ATL8C19445:1156..4405	gap2	ATCEA4S2780, ATCEA4S3442	95, 91	ATL8C19445:3114..4405	0.76	g4581132	48	656	3.7e-65	(AC005825) hypothetical protein [Arabidopsis thaliana]

151424	ATU013364	ATL8S12402:577..44	gap2	ATCEA4C14941_1	95	ATL8S12402:551..255	0.73	g4538920	48	445	1.1e-40	(AL049483) nitrogen fixation like protein [Arabidopsis thaliana]
151425	ATU013365	ATL8C8096:1..1042	gap2	ATCEA4C564_1	95	ATL8C8096:583..865	0.67	g2274857	48	429	3.0e-44	(AJ000469) glutathione peroxidase [Arabidopsis thaliana]
151426	ATU013366	ATL8C29332:667..1	gap2	ATCEA4S3321	95	ATL8C29332:531..127	0.50	g4204295	48	976	6.0e-100	(AC003027) lcl|prt_seq No definition line found [Arabidopsis thaliana]
151427	ATU013367	ATL8C3507:1..526	gap2	ATCEA4C12312_2, ATCEA4S34640	95, 90	ATL8C3507:208..283	0.47	g4886271	48	217	2.1e-19	(AL050300) putative protein [Arabidopsis thalia

												na]
151428	ATU013368	ATL8C31526:673..1350	gap2	ATCEA4S32441, ATCEA4C21450_1	95, 95			g3688174	48	427	2.9e-41	(AL031804) putative protein [Arabidopsis thaliana]
151429	ATU013369	ATL8C34512:1..846	gap2	ATCEA4C26025_1	95	ATL8C34512:172..627	0.97	g4586265	47	58	0.026	(AL049640) putative protein [Arabidopsis thaliana]
151430	ATU013370	ATL8C670:1..1024	gap2	ATCEA4C186_1, ATCEA4C186_2	95, 84	ATL8C670:353..831	0.94	g2500190	47	295	1.2e-08	RAC-LIKE GTP BINDING PROTEIN ARAC1 [Arabidopsis thaliana]
151431	ATU013371	ATL8C48432:621..1222	gap2	ATCEA4C54423_1	95	ATL8C48432:646..1142	0.80	g2088640	47	238	8.0e-07	(AF002109) unknown protein [Arabidopsis thaliana]
151432	ATU013	ATL8C8	gap2	ATCEA4	95	ATL8C8	0.76	g44544	47	699	2.0e-	(AC006

	372	444:856..1		S6654		444:655..205		80			70	234) putative (1-4)-beta-mannan endohydrolase [Arabidopsis thaliana]
151433	ATU013373	ATL8C36707:644..1	gap2	ATCEA4C1591_1, ATCEA4C1591_2, ATCEA4S10014	95, 91, 84	ATL8C36707:461..39	0.60	g3372230	47	276	1.0e-16	(AF017074) RNA polymerase I, II and III 16.5 kDa subunit [Arabidopsis thaliana]
151434	ATU013374	ATL8C1727:1053..1	gap2	ATCEA4C9519_1, ATCEA4S7363	95, 82	ATL8C1727:1013..84	0.57	g4455295	47	553	1.3e-51	(AL035528) isoflavone reductase-like protein [Arabidopsis thaliana]
151435	ATU013375	ATL8C8466:974..1	gap2	ATCEA4C67355_1,	95, 95	ATL8C8466:824..18	0.57	g3128175	47	142	1.4e-13	(AC004521) unknow

				ATCEA4S33088								n protein [Arabidopsis thaliana]
151436	ATU013376	ATL8C45292:1..290	gap2	ATCEA4C52106_1	95			g2832672	47	325	4.2e-28	(AL021712) nifU-like protein [Arabidopsis thaliana]
151437	ATU013377	ATL8C42642:999..1	gap2	ATCEA4C28777_1	95			g3292827	47	486	7.2e-54	(AL031018) putative protein [Arabidopsis thaliana]
151438	ATU013378	ATL8C853:1..856	gap2	ATCEA4S7569	95	ATL8C853:81..586	0.99	g3878640	46	426	2.5e-31	(Z49128) cDNA EST EMBL:M89010 comes from this gene; cDNA EST CEESB26F comes from this gene;

												cDNA EST EMBL:C12975 comes from this gene; cDNA EST yk340e10.5 comes from this gene; cDNA EST yk412a11.5 comes from this gene; cDNA EST... []
151439	ATU013379	ATL8C16929:166..1035	gap2	ATCEA4S11226	95	ATL8C16929:166..996	0.95	g2597824	46	906	7.2e-89	(AJ002532) endo-polygalacturonase [Arabidopsis thaliana]
151440	ATU013380	ATL8C48912:1..826	gap2	ATCEA4C6351_1	95	ATL8C48912:46..784	0.94	g3643085	46	322	5.3e-33	(AF075580) protein phosphatase-2C; PP2C

												[Mesembryanthemum crystallinum]
151441	ATU0133 81	ATL8C7558:158..1438	gap2	ATCEA4C1693_1	95	ATL8C7558:600..1240	0.93	g3342249	46	872	8.3e-69	(AF047719) GA3 [Arabidopsis thaliana]
151442	ATU0133 82	ATL8C34727:1540..1	gap2	ATCEA4S11302, ATCEA4S3236	95, 93	ATL8C34727:1464..299	0.93	g1572681	46	165	4.8e-13	(U69897) oligopeptidase B [Trypanosoma cruzi]
151443	ATU0133 83	ATL8C12405:641..1676	gap2	ATCEA4S24851, ATCEA4C17536_1	95, 93	ATL8C12405:678..1608	0.85	g4406759	46	254	1.5e-18	(AC006836) hypothetical protein [Arabidopsis thaliana]
151444	ATU0133 84	ATL8C18008:568..1	gap2	ATCEA4C57161_1	95	ATL8C18008:537..288	0.65	g3935175	46	406	2.2e-40	(AC004557) F17L21.18 [Arabidopsis thaliana]
151445	ATU0133 85	ATL8C16652:1..1418	gap2	ATCEA4S35192	95	ATL8C16652:110..1189	0.56	g3738295	46	823	9.7e-57	(AC005309) unknown protei

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												n [Arabidopsis thaliana]
151446	ATU013386	ATL8C49413:1173..1	gap2	ATCEA4S2328	95	ATL8C49413:969..17	0.52	g4886278	46	531	7.8e-53	(AL050300) putative protein [Arabidopsis thaliana]
151447	ATU013387	ATL8C4420:799..1	gap2	ATCEA4S7857	95	ATL8C4420:764..73	0.50	g3687231	46	1250	3.9e-120	(AC005169) hypothetical protein [Arabidopsis thaliana]
151448	ATU013388	ATL8S8968:19..523	gap2	ATCEA4S10727	95			g2809255	46	474	1.4e-42	(AC002560) F21B7.24 [Arabidopsis thaliana]
151449	ATU013389	ATL8C23631:1..1626	gap2	ATCEA4C18743_1	95	ATL8C23631:49..1626	0.96	g2244904	45	66	2.2e-09	(Z97339) similar to hypothetical protein C02F5.7 - Caenorha

												[Arabidopsis thaliana]
151450	ATU013390	ATL8C29720:1051..1	gap2	ATCEA4C36515_1	95	ATL8C29720:908..25	0.94	g3850583	45	599	5.0e-43	(AC005278) Contains similarity to transcription initiation factor IIE, alpha subunit gb|X63468 from Homo sapiens. [Arabidopsis thaliana]
151451	ATU013391	ATL8C31752:1466..1	gap2	ATCEA4S13112, ATCEA4C1784_1	95, 87	ATL8C31752:1416..331	0.89	g3348077	45	741	1.4e-60	(AF078080) isochorismate synthase [Arabidopsis thaliana]
151452	ATU013392	ATL8C1762:1..906	gap2	ATCEA4S30811	95	ATL8C1762:510..596	0.78	g4314360	45	167	2.7e-14	(AC006340) putati

												ve MADS-box protein AGL17 [Arabidopsis thaliana]
151453	ATU013393	ATL8C6646:90..4668	gap2	ATCEA4S16096	95	ATL8C6646:90..4586	0.77	g4689473, g3461838	45, 38	1050, 618	1.2e-92, 9.9e-82	(AC007213) putative receptor protein kinase [Arabidopsis thaliana]; (AC005315) putative receptor protein kinase [Arabidopsis thaliana]
151454	ATU013394	ATL8C42666:1423..1	gap2	ATCEA4S13616	95	ATL8C42666:1333..926	0.61	g4538967	45	412	1.5e-24	(AL049488) major intrinsic protein (MIP)-like

												[Arabidopsis thaliana]
151455	ATU013395	ATL8C9455:1172..1954	gap2	ATCEA4S19123, ATCEA4C28613_2	95, 89			g127112	45	297	6.0e-25	MAK16 PROTEIN [Saccharomyces cerevisiae]
151456	ATU013396	ATL8C933:762..1	gap2	ATCEA4S34253	95			g1402878	45	345	3.6e-31	(X98130) unknown [Arabidopsis thaliana]
151457	ATU013397	ATL8C45053:66..364	gap2	ATCEA4S33427	95			g2346966	45	65	1.3e-05	(AB004871) CPC [Arabidopsis thaliana]
151458	ATU013398	ATL8C39774:1..896	gap2	ATCEA4C48681_1	95	ATL8C39774:307..205	0.91	g2642158	44	518	5.7e-53	(AC003000) hypothetical protein [Arabidopsis thaliana]
151459	ATU013399	ATL8C10248:126..1067	gap2	ATCEA4C16685_1	95	ATL8C10248:126..957	0.87	g4835758	44	269		(AC007202) ESTs gb|T22000 and gb|AA5

												85765 come from this gene. [Arabidopsis thaliana]
151460	ATU013400	ATL8C30156:1..428	gap2	ATCEA4C26847_1	95	ATL8C30156:314..424	0.71	g2979565	44	276	8.7e-26	(AC003680) putative sin3 associated polypeptide (SAP18) [Arabidopsis thaliana]
151461	ATU013401	ATL8C414:1..2577	gap2	ATCEA4S304	95	ATL8C414:188..2577	0.69	g4056482	44	1764	1.0e-130	(AC005896) putative ABC transporter [Arabidopsis thaliana]
151462	ATU013402	ATL8C1160:1561..1	gap2	ATCEA4S8497	95			g1931652	44	1783	9.0e-186	(U95973) phosphatidylinositol-4-phosphate 5-kinase isolog [Arabi

												dopsis thaliana]
151463	ATU013403	ATL8C26459:1..1077	gap2	ATCEA4C6659_1, ATCEA4C70509_1	95, 86	ATL8C26459:60..978	0.95	g4544389	43	505	8.3e-48	(AC007047) putative homeodomain protein [Arabidopsis thaliana]
151464	ATU013404	ATL8C10615:589..1	gap2	ATCEA4C28421_2, ATCEA4S17315	95, 85	ATL8C10615:489..39	0.94	g4415915	43	161		(AC006282) putative pectin methylesterase [Arabidopsis thaliana]
151465	ATU013405	ATL8S16244:593..1	gap2	ATCEA4S31412	95	ATL8S16244:567..92	0.93	g3075395	43	389	1.8e-29	(AC004484) nodulin-35 homologue [Arabidopsis thaliana]
151466	ATU013406	ATL8C36188:1..1879	gap2	ATCEA4S26794	95	ATL8C36188:237..1879	0.91	g3269291	43	1395	7.8e-128	(AL030978) putative receptor protein

												kinase [Arabidopsis thaliana]
151467	ATU013407	ATL8C23585:1..945	gap2	ATCEA4S28625	95	ATL8C23585:149..781	0.83	g3834319	43	279	3.8e-20	(AC005679) Similar to [Arabidopsis thaliana]
151468	ATU013408	ATL8C27330:259..1603	gap2	ATCEA4C87810_1, ATCEA4S17753, ATCEA4C27244_1	95, 92, 91	ATL8C27330:440..1311	0.45	g3046695	43	79		(AL022224) putative protein [Arabidopsis thaliana]
151469	ATU013409	ATL8C45664:280..1123	gap2	ATCEA4C30873_1	95			g2222777	43	91	0.99995	(Y13986) GTP-binding protein [Ostertagia circumcincta]
151470	ATU013410	ATL8C23887:1..699	gap2	ATCEA4S32119	95			g4049347	43	500	2.1e-48	(AL034567) putative protein [Arabidopsis thaliana]

151471	ATU013411	ATL8C32844:5..1439	gap2	ATCEA4C31372_1	95	ATL8C32844:5..1389	0.99	g4455302	42	269	1.7e-12	(AL035528) putative protein [Arabidopsis thaliana]
151472	ATU013412	ATL8C47478:1197..1	gap2	ATCEA4C11871_1, ATCEA4C9505_1	95, 83	ATL8C47478:731..262	0.97	g3250697	42	502	1.5e-50	(AL024486) putative protein [Arabidopsis thaliana]
151473	ATU013413	ATL8C48461:154..1737	gap2	ATCEA4S12113	95	ATL8C48461:154..1620	0.88	g3193320	42	709	1.4e-49	(AF069299) contains similarity to the subtilase family of serine proteases (Pfam: subtilase.hmm, score: 47.57); strong similarity to

												Cucumis melo (muskmelon) cucumisin (GB:D32206) [Arabidopsis thaliana]
151474	ATU013414	ATL8C2 2065:1..1699	gap2	ATCEA4C4776_1	95	ATL8C2 2065:661..1379	0.85	g2627181	42	968	3.1e-63	(D89619) cycloartenol synthase [Pisum sativum]
151475	ATU013415	ATL8S1 2058:491..1	gap2	ATCEA4S28648, ATCEA4S10759, ATCEA4C66843_1	95, 85, 83	ATL8S1 2058:387..63	0.61	g4468806	42	416	2.2e-43	(AL035601) cytochrome P450 monooxygenase-like protein [Arabidopsis thaliana]
151476	ATU013416	ATL8C3 9551:2431..1	gap2	ATCEA4S7548	95	ATL8C3 9551:980..21	0.54	g1707007, g4803934	42, 40	257, 209	2.8e-27, 1.4e-12	(U78721) hypothetical protein [Arabidopsis thaliana];

												(AC006264) unknown protein [Arabidopsis thaliana]
151477	ATU013417	ATL8C32298:3232..3613	gap2	ATCEA4C22462_1	95			g4539419	42	105	5.5e-06	(AL049171) putative ribosomal protein [Arabidopsis thaliana]
151478	ATU013418	ATL8C3263:1..2700	gap2	ATCEA4S1307	95			g3738337, g3859600	42, 42	1321, 805	1.0e-146, 1.8e-87	(AC005170) putative reverse transcriptase [Arabidopsis thaliana]; (AF104919) T15B16.6 gene product [Arabidopsis thalia

												na]
151479	ATU013419	ATL8C6057:1..1368	gap2	ATCEA4C29986_1	95	ATL8C6057:21..1351	0.98	g4538947	41	285	7.0e-15	(AL049483) putative mitochondrial carrier protein [Arabidopsis thaliana]
151480	ATU013420	ATL8C43488:440..1	gap2	ATCEA4C73496_1	95	ATL8C43488:102..26	0.98	g3024710	41	59		TRANSCRIPTION INITIATION FACTOR TFIID 20/15 KD SUBUNITS (TAFII-20/TAFII-15) (TAFII 20/TAFII15) (TFIID SUBUNIT P22) [Xenopus laevis]
151481	ATU013421	ATL8C29682:1..2035	gap2	ATCEA4S5713, ATCEA4C55934	95, 89	ATL8C29682:18..1889	0.92	g2766715	41	562	8.1e-32	(AF039365) chromomethyl

				_1								ase [Arabidopsis arenosa]
151482	ATU013422	ATL8C26473:2131..300	gap2	ATCEA4S26067	95	ATL8C26473:2123..300	0.77	g2674203	41	573	9.7e-34	(AF036328) CLP protease regulatory subunit CLPX [Arabidopsis thaliana]
151483	ATU013423	ATL8C49174:1006..2172	gap2	ATCEA4C585_1	95	ATL8C49174:1299..2166	0.73	g2154715	41	1133	1.5e-68	(Y09418) CDPK-related protein kinase [Arabidopsis thaliana]
151484	ATU013424	ATL8C21430:736..1	gap2	ATCEA4C141471_1	95	ATL8C21430:728..86	0.51	g4176420	41	326	2.4e-33	(AB008097) cytochrome P450 [Arabidopsis thaliana]
151485	ATU013425	ATL8C23563:1096..1	gap2	ATCEA4S36341	95			g4101564	41	452	4.7e-28	(AF004556) IFA-binding protei

												n [Arabidopsis thaliana]
151486	ATU013426	ATL8C30274:3490..838	gap2	ATCEA4S4392, ATCEA4C30553_1	95, 94	ATL8C30274:3456..838	0.97	g1079136	40	150	3.2e-09	RNA-binding protein cabeza - fruit fly (Drosophila melanogaster) [Drosophila melanogaster]
151487	ATU013427	ATL8C27390:940..1	gap2	ATCEA4C56968_1, ATCEA4S2516	95, 85	ATL8C27390:638..237	0.93	g2832649	40	770		(AL021710) adenylosuccinate lyase - like protein [Arabidopsis thaliana]
151488	ATU013428	ATL8C12973:1..1635	gap2	ATCEA4C80713_1	95	ATL8C12973:71..1343	0.81	g3881836	40	695	3.8e-60	(Z78019) Similarity to Yeast LPG22P protei

												n (TR:G1151240); cDNA EST EMBL:T00686 comes from this gene; cDNA EST EMBL:C12415 comes from this gene; cDNA EST EMBL:C12728 comes from this gene; cDNA EST EMBL:C10626 comes from this ge... []
151489	ATU013429	ATL8C38628:1..1187	gap2	ATCEA4S36126, ATCEA4S15117	95, 89	ATL8C38628:56..951	0.74	g2224911	40	58	1.7e-05	(U93048) somatic embryogenesis recept

												or-like kinase [Daucus carota]
151490	ATU013430	ATL8C16044:3410..910	gap2	ATCEA4S1719	95	ATL8C16044:3410..3000	0.69	g4454027	40	152	6.8e-05	(AL035394) putative protein [Arabidopsis thaliana]
151491	ATU013431	ATL8C34051:1..1025	gap2	ATCEA4S33245, ATCEA4S31023	95, 87	ATL8C34051:147..384	0.67	g3021270	40	1132	8.9e-119	(AL022347) serine/threonine kinase-like protein [Arabidopsis thaliana]
151492	ATU013432	ATL8C13984:1..963	gap2	ATCEA4S29780, ATCEA4C3938_1, ATCEA4S30488	95, 94, 82	ATL8C13984:183..774	0.67	g4850398, g82211	40, 32	646, 204	2.8e-68, 1.9e-17	(AC007357) Strong similarity to []; rpoC protein homolog - common tobacco

												chloroplast []
151493	ATU013433	ATL8S3256:276..678	gap2	ATCEA4C121347_1	95	ATL8S3256:527..361	0.63	g2492613	40	107	8.6e-11	FLAVONOL SYNTHASE (FLS) [Solanum tuberosum]
151494	ATU013434	ATL8C35595:1..1316	gap2	ATCEA4C16963_1, ATCEA4S372	95, 95	ATL8C35595:55..1186	0.63	g4371296	40	1791	6.5e-187	(AC006260) putative receptor protein kinase [Arabidopsis thaliana]
151495	ATU013435	ATL8S18744:591..1	gap2	ATCEA4C12385_1, ATCEA4C14056_1	95, 84	ATL8S18744:518..180	0.52	g4099090	40	562	1.2e-59	(U83178) unknown [Arabidopsis thaliana]
151496	ATU013436	ATL8S322:601..1	gap2	ATCEA4C81216_1	95	ATL8S322:348..145	0.43	g3335353	40	860	2.5e-87	(AC004512) Similar to cytochrome P450 gb|X90458 from A. thalia

												na. [Arabidopsis thaliana]
151497	ATU013437	ATL8C27510:998..477	gap2	ATCEA4C536_1	95	ATL8C27510:913..614	0.40	g1546700	40	701		(X98804) peroxidase ATP18a [Arabidopsis thaliana]
151498	ATU013438	ATL8C40824:1..787	gap2	ATCEA4C21385_1, ATCEA4S19889	95, 94			g2129578	40	619	5.8e-64	dTDP-glucose 4-6-dehydratases homolog - Arabidopsis thaliana [Arabidopsis thaliana]
151499	ATU013439	ATL8C7690:589..3713	gap2	ATCEA4S36320	95			g4689479	40	108	0.10	(AC007213) hypothetical protein [Arabidopsis thaliana]
151500	ATU013440	ATL8C45018:714..1	gap2	ATCEA4C122095_1	95	ATL8C45018:677..245	0.99	g2495120	39	255	7.7e-17	POSSIBLE THIOPHENE AND FURAN

												OXIDATION PROTEIN THDF [Synechocystis sp.]
151501	ATU013441	ATL8C32929:1501..1	gap2	ATCEA4C7895_1, ATCEA4S36273, ATCEA4S34047	95, 86, 82	ATL8C32929:1440..165	0.95	g3021283	39	1218	3.2e-92	(AL022347) serine/threonine kinase-like protein [Arabidopsis thaliana]
151502	ATU013442	ATL8S9285:1..599	gap2	ATCEA4C17351_1	95	ATL8S9285:107..259	0.95	g4455313	39	353	5.2e-34	(AL035528) fatty acid elongase-like protein (cer2-like) [Arabidopsis thaliana]
151503	ATU013443	ATL8C11908:1127..1	gap2	ATCEA4C35742_1	95	ATL8C11908:1049..529	0.90	g3335359	39	891	5.1e-92	(AC003028) unknown protein [Arabidopsis thalia

												na]
151504	ATU013444	ATL8C38117:1617..1	gap2	ATCEA4S2162	95	ATL8C38117:1474..453	0.85	g1706318	39	573	4.9e-69	GLUTAMATE DECARBOXYLASE (GAD) (ERTD1) [Lycopersicon esculentum]
151505	ATU013445	ATL8C4080:662..1	gap2	ATCEA4S2414	95	ATL8C4080:573..77	0.73	g3549672	39	433	2.6e-26	(AL031394) putative protein [Arabidopsis thaliana]
151506	ATU013446	ATL8C6926:863..2249	gap2	ATCEA4S7749	95	ATL8C6926:958..2104	0.66	g2688299	39	464	3.6e-39	(AE001145) prolyl-tRNA synthetase (proS) [Borrelia burgdorferi]
151507	ATU013447	ATL8C97:733..1	gap2	ATCEA4S12419, ATCEA4S29481	95, 90	ATL8C97:669..360	0.58	g4587547	39	209	2.8e-16	(AC006577) Contains similarity to DNA-binding

												protein Gt-2 gb|X68261 from Oryza sativa. [Arabidopsis thaliana]
151508	ATU013448	ATL8C15886:1..2753	gap2	ATCEA4C7885_1, ATCEA4C45269_1	95, 83	ATL8C15886:128..2753	0.42	g3236256	39	106	4.5e-07	(AC004684) putative zinc finger protein [Arabidopsis thaliana]
151509	ATU013449	ATL8C29727:1..2121	gap2	ATCEA4S5837	95	ATL8C29727:95..2100	0.41	g1184077	39	576	1.3e-53	(U42445) Cf-2.2 [Lycopersicon pimpinellifolium]
151510	ATU013450	ATL8C22251:709..210	gap2	ATCEA4S11145, ATCEA4S1082	95, 89			g4455341	39	529	1.8e-33	(AL035522) O-methyltransferase-like protein [Arabidopsis thalia

												na]
151511	ATU013451	ATL8C35820:1..1030	gap2	ATCEA4S28374	95	ATL8C35820:19..936	0.99	g1931640	38	305	5.2e-31	(U95973) Serine carboxypeptidase isolog [Arabidopsis thaliana]
151512	ATU013452	ATL8C4469:1..1035	gap2	ATCEA4C17830_1, ATCEA4C23082_1	95, 94	ATL8C4469:19..987	0.93	g3328450	38	481	4.3e-50	(AE001280) hypothetical protein [Chlamydia trachomatis]
151513	ATU013453	ATL8C26574:1..1982	gap2	ATCEA4S32366, ATCEA4C71271_2	95, 84	ATL8C26574:435..1854	0.91	g1705594	38	138	1.1e-09	PEROXISOME ASSEMBLY PROTEIN CAR1 (PEROXIN-2) [Podospora anserina]
151514	ATU013454	ATL8C23652:3616..2437	gap2	ATCEA4S32107	95	ATL8C23652:3127..2627	0.90	g4678293	38	521	6.0e-36	(AL049655) hypothetical protein [Arabidopsis thaliana]

151515	ATU013455	ATL8C6726:2105..1611	gap2	ATCEA4C32738_1	95	ATL8C6726:2085..1611	0.78	g4206196	38	624	4.5e-46	(AF071527) hypothetical protein [Arabidopsis thaliana]
151516	ATU013456	ATL8C45901:1062..1	gap2	ATCEA4C73732_2, ATCEA4C73732_1, ATCEA4S34210	95, 86, 83	ATL8C45901:858..112	0.76	g2088650	38	448	4.3e-26	(AF002109) peroxisomal ATP/ADP carrier protein isolog [Arabidopsis thaliana]
151517	ATU013457	ATL8C34909:557..1	gap2	ATCEA4S31980	95	ATL8C34909:557..206	0.69	g3176725	38	510	1.0e-47	(AC002392) unknown protein [Arabidopsis thaliana]
151518	ATU013458	ATL8C25815:230..894	gap2	ATCEA4C15177_1	95	ATL8C25815:640..874	0.68	g2739044	38	242	4.5e-17	(AF024651) polyphosphoinositide binding protein

												Sshlp [Glycine max]
151519	ATU013459	ATL8C14555:721..1	gap2	ATCEA4S25235	95	ATL8C14555:651..53	0.60	g2947067	38	170	1.9e-14	(AC002521) hypothetical protein [Arabidopsis thaliana]
151520	ATU013460	ATL8C7685:2342..1	gap2	ATCEA4S33474, ATCEA4C25490_1	95, 94	ATL8C7685:2054..438	0.54	g3297814	38	869	9.5e-64	(AL031032) putative protein [Arabidopsis thaliana]
151521	ATU013461	ATL8C46980:3196..7088	gap2	ATCEA4S17442	95	ATL8C46980:4825..7088	0.42	g4850412	38	1416	1.2e-146	(AC007288) putative MuDR MURA transposase [Arabidopsis thaliana]
151522	ATU013462	ATL8C27908:930..131	gap2	ATCEA4S33169	95			g4835235	38	188		(AL049862) putative protein [Arabidopsis thalia

												na]
151523	ATU013463	ATL8C45804:1035..2207	gap2	ATCEA4S32622, ATCEA4C37459_1	95, 92			g2132930	38	191	2.2e-10	probable membrane protein YOR262w - yeast (Saccharomyces cerevisiae) [Saccharomyces cerevisiae]
151524	ATU013464	ATL8C42314:2820..1096	gap2	ATCEA4S12669, ATCEA4S36192	95, 83	ATL8C42314:2649..1370	0.92	g4325354	37	1385	1.8e-149	(AF128395) contains similarity to retrovirus-related polyproteins and to CCHC zinc finger protein (Pfam: PF00098, Score=16.3, E=0.05

												1, E= 1) [Arabidopsis thaliana]
151525	ATU013465	ATL8C1542:1..1216	gap2	ATCEA4S21377, ATCEA4C45759_1, ATCEA4S27751	95, 92, 86	ATL8C1542:121..1216	0.91	g1707642	37	1181	1.1e-126	(Y07748) TMK [Oryza sativa]
151526	ATU013466	ATL8C47205:3838..1	gap2	ATCEA4S30660	95	ATL8C47205:3838..144	0.87	g2492509	37	219	2.6e-08	CELL DIVISION PROTEIN FTSH HOMOLOG [Mycoplasma pneumoniae]
151527	ATU013467	ATL8C35805:2349..1	gap2	ATCEA4C18775_1, ATCEA4S2793, ATCEA4S2523	95, 92, 89	ATL8C35805:2349..157	0.85	g4758032	37	998	2.3e-89	coatomer protein complex, subunit beta 2 (beta prime) [Homo sapiens]
151528	ATU013468	ATL8C9810:104..1545	gap2	ATCEA4S34592	95	ATL8C9810:104..1531	0.84	g3150239	37	166	1.5e-12	(AL023635) hypothetical protein

												MLCB1243.38 [Mycobacterium leprae]
151529	ATU013469	ATL8S307:53..574	gap2	ATCEA4S6092	95	ATL8S307:183..482	0.77	g2342722	37	718	2.6e-65	(AC002341) unknown protein [Arabidopsis thaliana]
151530	ATU013470	ATL8C14456:3491..1	gap2	ATCEA4S32888, ATCEA4S12529, ATCEA4S36013	95, 86, 86	ATL8C14456:3491..2606, ATL8C14456:2296..829	0.72, 0.91	g4836930, g3056599	37, 30	1071, 1138	3.4e-101, 1.3e-88	(AC006085) Hypothetical protein [Arabidopsis thaliana]; (AC004255) T1F9.20 [Arabidopsis thaliana]
151531	ATU013471	ATL8C40032:70..683	gap2	ATCEA4C116961_1	95	ATL8C40032:70..319	0.72	g4097547	37	262	4.4e-12	(U64906) ATFP3 [Arabidopsis thaliana]
151532	ATU013472	ATL8S23269:77..343	gap2	ATCEA4C23678_1	95	ATL8S23269:124..33	0.54	g1363487	37	392	4.2e-21	IAA7 protein -

						1						Arabidopsis thaliana [Arabidopsis thaliana]
151533	ATU013473	ATL8C2 2192:388..1	gap2	ATCEA4S6005	95			g3252868	37	220	6.8e-16	(AF033536) putative zinc transporter [Arabidopsis thaliana]
151534	ATU013474	ATL8C8 53:1370..1611	gap2	ATCEA4C24095_1	95			g2459433	37	139	2.9e-14	(AC002332) hypothetical protein [Arabidopsis thaliana]
151535	ATU013475	ATL8C2 940:647..1	gap2	ATCEA4C31772_1	95			g3128195	37	413	1.0e-31	(AC004521) putative phosphoribosyl pyrophosphate synthetase [Arabidopsis thaliana]

151536	ATU013476	ATL8C38775:760..267	gap2	ATCEA4S36100	95	ATL8C38775:582..361	0.97	g129692	36	332	1.1e-32	PROLIFERATING CELL NUCLEAR ANTIGEN (PCNA) (CYCLIN) []
151537	ATU013477	ATL8C1592:4861..3778	gap2	ATCEA4S3188	95	ATL8C1592:4706..3778	0.96	g4490341	36	1096	3.5e-111	(AL035656) putative protein [Arabidopsis thaliana]
151538	ATU013478	ATL8S17251:1..558	gap2	ATCEA4C43236_1	95	ATL8S17251:66..467	0.95	g2739373	36	104	1.1e-07	(AC002505) putative flavonol 3-o-glucosyltransferase [Arabidopsis thaliana]
151539	ATU013479	ATL8C27552:914..106	gap2	ATCEA4C37340_1	95	ATL8C27552:790..120	0.89	g1708025	36	419		GLYCEROL-3-PHOSPHATE DEHYDROGENASE [Cuphea lanceo

												lata]
151540	ATU013480	ATL8C36717:1071..1	gap2	ATCEA4C4363_2, ATCEA4S19124, ATCEA4S8221	95, 86, 82	ATL8C36717:892..149	0.77	g4220446	36	664	5.3e-73	(AC006216) Strong similarity to [Arabidopsis thaliana]
151541	ATU013481	ATL8C35747:162..1023	gap2	ATCEA4C1914_1	95	ATL8C35747:193..969	0.74	g557880	36	841	3.5e-54	(U13203) phosphoinositide-specific phospholipase C [Arabidopsis thaliana]
151542	ATU013482	ATL8C28483:1046..1	gap2	ATCEA4S4947	95	ATL8C28483:443..240	0.73	g1814424	36	120	2.4e-10	(U85254) homeodomain protein AHDP [Arabidopsis thaliana]
151543	ATU013483	ATL8S21243:744..95	gap2	ATCEA4S12300	95	ATL8S21243:493..122	0.51	g4115371	36	707	2.7e-64	(AC005967) unknown protein [Arabidopsis thaliana]

151544	ATU013484	ATL8C25625:2136..822	gap2	ATCEA4C94165_1	95			g4406778	36	710	4.8e-82	(AC006532) putative brassinosteroid insensitive protein [Arabidopsis thaliana]
151545	ATU013485	ATL8C27179:1472..500	gap2	ATCEA4C11138_2, ATCEA4S30603	95, 88			g1871180	36	427	7.0e-27	(U90439) unknown protein [Arabidopsis thaliana]
151546	ATU013486	ATL8C39286:1..3193	gap2	ATCEA4S1245	95	ATL8C39286:1259..2577	1.00	g2864623	35	2116	4.9e-220	(AL021811) putative protein [Arabidopsis thaliana]
151547	ATU013487	ATL8C12192:1..841	gap2	ATCEA4C90131_1	95	ATL8C12192:15..751	0.96	g3201554	35	449	4.8e-50	(AJ006501) beta-D-glucosidase [Tropaeolum majus]
151548	ATU013	ATL8C3	gap2	ATCEA4	95, 83	ATL8C3	0.92	g46462	35	560	8.3e-	(AC007

	488	8704:1..1083		S10562, ATCEA4C8256_1		8704:56..935		06			53	230) Contains similarity to gb|D13630 KIAA0005 gene from Homo sapiens. ESTs gb|T45345, gb|T21086, gb|R90360, gb|T20468, gb|T45191 and gb|AI100459 come from this gene. [Arabidopsis thaliana]
151549	ATU013489	ATL8C5285:2238..1268	gap2	ATCEA4C61688_1	95	ATL8C5285:2131..1500	0.78	g3287681	35	528	4.7e-47	(AC003979) ESTs gb|Z34075, gb|Z34835 and

												gb|AA404888 come from this gene. [Arabidopsis thaliana]
151550	ATU013490	ATL8C30135:1563..1	gap2	ATCEA4S2099	95	ATL8C30135:1426..276	0.76	g2674203	35	277	3.6e-15	(AF036328) CLP protease regulatory subunit CLPX [Arabidopsis thaliana]
151551	ATU013491	ATL8C1915:1..553	gap2	ATCEA4C679_1	95	ATL8C1915:104..468	0.76	g3776005	35	562	3.4e-38	(AJ010466) RNA helicase [Arabidopsis thaliana]
151552	ATU013492	ATL8C11891:1048..1	gap2	ATCEA4C2487_3	95	ATL8C11891:789..381	0.64	g3367537	35	316	5.4e-32	(AC004392) Contains similarity to ANK repeat region of Fowlpox virus

												BamHI-orf7 protein homolog C18F10.7 []
151553	ATU013493	ATL8C2979:1429..1	gap2	ATCEA4C20999_1	95	ATL8C2979:1244..142	0.59	g2827552	35	1119	7.7e-131	(AL021635) predicted protein [Arabidopsis thaliana]
151554	ATU013494	ATL8C12704:1..993	gap2	ATCEA4C106991_1	95	ATL8C12704:62..557	0.50	g2924778	35	1230	6.5e-119	(AC002334) putative polygalacturonase [Arabidopsis thaliana]
151555	ATU013495	ATL8S27376:446..1	gap2	ATCEA4C22892_1	95			g4455185	35	97	4.2e-05	(AL035521) putative protein [Arabidopsis thaliana]
151556	ATU013496	ATL8C11822:1037..395	gap2	ATCEA4C14885_1	95	ATL8C11822:889..395	0.93	g2827551	34	791	8.3e-85	(AL021635) predicted protein

												[Arabidopsis thaliana]
151557	ATU013497	ATL8C32690:1..815	gap2	ATCEA4C115771_1	95	ATL8C32690:216..763	0.90	g2160185	34	1001	4.0e-103	(AC000132) Similar to S. pombe ISP4 (gb|D83992). [Arabidopsis thaliana]
151558	ATU013498	ATL8C17399:485..1035	gap2	ATCEA4S31303	95	ATL8C17399:492..679	0.86	g3176707	34	466	5.7e-50	(AC002392) putative proline-rich protein APG [Arabidopsis thaliana]
151559	ATU013499	ATL8C8281:94..1102	gap2	ATCEA4C29706_1	95	ATL8C8281:94..1091	0.84	g4586308	34	495	9.2e-47	(AB025102) protoporphyrinogen IX oxidase [Glycine max]
151560	ATU013500	ATL8C47494:1..1697	gap2	ATCEA4C4837_1	95	ATL8C47494:46..1538	0.83	g3080740	34	83	4.3e-06	(U77366) pasticcino 1-D

												[Arabidopsis thaliana]
151561	ATU013501	ATL8C37376:1..1078	gap2	ATCEA4S30195	95	ATL8C37376:71..748	0.79	g4587577	34	399		(AC006550) F10O3.17 [Arabidopsis thaliana]
151562	ATU013502	ATL8C36815:1..1184	gap2	ATCEA4C24215_1, ATCEA4C24215_2	95, 92	ATL8C36815:42..359	0.79	g968987	34	205	0.0014	(U31648) ferritin [Glycine max]
151563	ATU013503	ATL8C13752:82..2143	gap2	ATCEA4C29532_1, ATCEA4S22506	95, 82	ATL8C13752:331..2133	0.77	g2194132	34	600	4.0e-58	(AC002062) No definition line found [Arabidopsis thaliana]
151564	ATU013504	ATL8C15198:2223..978	gap2	ATCEA4S11189	95	ATL8C15198:2200..978	0.70	g3482940	34	1432	6.3e-135	(AC005315) putative ligand-gated ionic channel [Arabidopsis thaliana]
151565	ATU013	ATL8C1	gap2	ATCEA4	95	ATL8C1	0.65	g33779	34	1975		(AL021

	505	0561:2166..1		S6258		0561:1931..77		41				960) putative protein (fragment) [Arabidopsis thaliana]
151566	ATU013506	ATL8C27580:229..618	gap2	ATCEA4S7284	95	ATL8C27580:229..600	0.62	g1703219	34	301		AIG1 PROTEIN [Arabidopsis thaliana]
151567	ATU013507	ATL8C10057:1165..1	gap2	ATCEA4C95485_2, ATCEA4S34932, ATCEA4S16846, ATCEA4S22084	95, 95, 95, 94	ATL8C10057:1050..711	0.97	g3643607	33	372		(AC005395) unknown protein [Arabidopsis thaliana]
151568	ATU013508	ATL8C41161:1..575	gap2	ATCEA4C73590_1	95	ATL8C41161:61..364	0.94	g4510385	33	291	3.6e-32	(AC007017) unknown protein [Arabidopsis thaliana]
151569	ATU013509	ATL8S20503:1..564	gap2	ATCEA4C13475_1	95	ATL8S20503:67..519	0.93	g2194144	33	708	3.6e-67	(AC002062) F20P5.8 [Arabidopsis

												thaliana]
151570	ATU013510	ATL8C6824:426..1	gap2	ATCEA4S15885, ATCEA4C1233_3, ATCEA4S32708	95, 87, 84	ATL8C6824:189..336	0.80	g2129517	33	462	9.1e-45	24-sterol C-methyltransferase (EC 2.1.1.41) - Arabidopsis thaliana []
151571	ATU013511	ATL8S30788:602..1	gap2	ATCEA4C1744_1	95	ATL8S30788:553..174	0.79	g3941466	33	482	9.0e-49	(AF062887) putative transcription factor [Arabidopsis thaliana]
151572	ATU013512	ATL8C15348:2366..1	gap2	ATCEA4C15807_1	95	ATL8C15348:2161..391	0.77	g3914015	33	661	7.6e-54	TRANSCRIPTION-REPAIR COUPLING FACTOR (TRCF) [Synechocystis sp.]
151573	ATU013513	ATL8C43764:917..1	gap2	ATCEA4C92719_1	95	ATL8C43764:917..302	0.74	g4263549	33	734		(AC006250) putative En/Spm transp

												oson hypothetical protein 1 [Arabidopsis thaliana]
151574	ATU013514	ATL8S21424:105..442	gap2	ATCEA4C1916_1, ATCEA4S14741	95, 94	ATL8S21424:105..332	0.72	g2501188	33	485	1.0e-48	THIAZOLE BIOSYNTHETIC ENZYME [Arabidopsis thaliana]
151575	ATU013515	ATL8C5729:536..1279	gap2	ATCEA4C18894_1	95	ATL8C5729:611..1279	0.70	g578549	33	100		(Z22614) ubiquitin [Tetrahymena pyriformis]
151576	ATU013516	ATL8C9831:1..3151	gap2	ATCEA4S126	95	ATL8C9831:308..665, ATL8C9831:2911..2391	0.65, 0.79	g4006831	33	1037	1.1e-98	(AC005970) putative reverse transcriptase [Arabidopsis thaliana]
151577	ATU013517	ATL8C41729:1..1317	gap2	ATCEA4S321	95	ATL8C41729:144..1094	0.64	g4432802	33	1230	4.0e-123	(AC006437) putative pol polyprotein,

												5' partial [Arabidopsis thaliana]
151578	ATU013518	ATL8C36023:1145..1	gap2	ATCEA4S3783	95	ATL8C36023:1048..862	0.45	g4204280	33	505	2.3e-43	(AC004146) Hypothetical protein [Arabidopsis thaliana]
151579	ATU013519	ATL8C49246:496..1981	gap2	ATCEA4C355_1	95			g2130944	33	847	5.5e-70	(AB004060) sulfate transporter [Arabidopsis thaliana]
151580	ATU013520	ATL8C3645:1..629	gap2	ATCEA4C8919_1	95			g4587550	33	443	5.9e-38	(AC006577) EST gb|R64848 comes from this gene. [Arabidopsis thaliana]
151581	ATU013521	ATL8S11636:469..1	gap2	ATCEA4S7045, ATCEA4S30724	95, 92			g2244749	33	517	3.9e-50	(Z97335) hydroxymethyltrans

												ferase [Arabidopsis thaliana]
151582	ATU013522	ATL8C6735:1..609	gap2	ATCEA4S34668	95			g3212850	33	135	1.9e-11	(AC004005) unknown protein [Arabidopsis thaliana]
151583	ATU013523	ATL8C13232:647..1	gap2	ATCEA4C412_1	95			g2245108	33	886	4.2e-65	(Z97343) EREBP-4 homolog [Arabidopsis thaliana]
151584	ATU013524	ATL8S18210:1..390	gap2	ATCEA4S36088	95	ATL8S18210:118..329	0.99	g3024666	32	420	5.5e-40	STRICTOSIDINE SYNTHASE 1/2 PRECURSOR [Arabidopsis thaliana]
151585	ATU013525	ATL8C20830:898..85	gap2	ATCEA4C1656_1, ATCEA4S14589	95, 89	ATL8C20830:668..315	0.98	g2746341	32	707	2.6e-76	(AF037590) ATA27 [Arabidopsis thaliana]
151586	ATU013	ATL8C3	gap2	ATCEA4	95	ATL8C3	0.91	g24157	32	140	3.7e-	(AJ001

	526	5626:1..1428		S36154		5626:173..1428		04			10	361) proline iminopeptidase [Propionibacterium freudenreichii subsp. shermanii]
151587	ATU013527	ATL8C16020:1536..293	gap2	ATCEA4S1999	95	ATL8C16020:1406..293	0.86	g2791900	32	294	6.6e-19	(AJ000057) PP7 [Arabidopsis thaliana]
151588	ATU013528	ATL8C23116:1..892	gap2	ATCEA4S29961	95	ATL8C23116:102..718	0.78	g3386611	32	332	6.1e-34	(AC004665) unknown protein [Arabidopsis thaliana]
151589	ATU013529	ATL8C18935:402..1	gap2	ATCEA4C46_6, ATCEA4C46_3, ATCEA4S32010, ATCEA4S29179	95, 95, 93, 83	ATL8C18935:244..141	0.69	g2245008	32	112	1.5e-06	(Z97341) hypothetical protein [Arabidopsis thaliana]
151590	ATU013530	ATL8C33226:999..1	gap2	ATCEA4S36251	95	ATL8C33226:682..17	0.61	g3777483	32	742	1.1e-56	(AB018695) sulfat

						7						e transporter [Arabidopsis thaliana]
151591	ATU013531	ATL8C24713:2060..1	gap2	ATCEA4C16487_1	95	ATL8C24713:1382..369	0.47	g4455359	32	653	1.3e-52	(AL035524) putative protein [Arabidopsis thaliana]
151592	ATU013532	ATL8C47956:572..1	gap2	ATCEA4C10377_1	95			g3402703	32	380	1.1e-26	(AC004261) hypothetical protein [Arabidopsis thaliana]
151593	ATU013533	ATL8C4615:1..737	gap2	ATCEA4C11681_1, ATCEA4S7087	95, 92			g3335378	32	267	2.1e-27	(AC003028) Myb-related transcription activator [Arabidopsis thaliana]
151594	ATU013534	ATL8C48078:692..1	gap2	ATCEA4S8481, ATCEA4C11699	95, 93			g4115381	32	568	1.0e-47	(AC005967) putative

				9_1								limonene cyclase [Arabidopsis thaliana]
151595	ATU013535	ATL8C18206:22..580	gap2	ATCEA4S2930	95	ATL8C18206:22..430	0.99	g3033391	31	404	5.1e-40	(AC00423*8) putative amino acid transporter [Arabidopsis thaliana]
151596	ATU013536	ATL8C48071:36..1920	gap2	ATCEA4S2936	95	ATL8C48071:184..1146	0.99	g3850821	31	48	0.9999	(Y18350) U2 snRNP auxiliary factor, large subunit [Nicotiana plumbaginifolia]
151597	ATU013537	ATL8C20174:109..2804	gap2	ATCEA4S11853, ATCEA4C27848_1	95, 84	ATL8C20174:109..2604	0.92	g4646217	31	835	7.0e-37	(AC007290) putative phosphoprotein phosphatase [Arabi

												dopsis thaliana]
151598	ATU013538	ATL8C12829:1587..1093	gap2	ATCEA4S29763	95	ATL8C12829:1524..1093	0.83	g2317908	31	787	1.5e-71	(U89959) Unknown protein [Arabidopsis thaliana]
151599	ATU013539	ATL8C35219:31..1619	gap2	ATCEA4S14770, ATCEA4C26242_1, ATCEA4S27894	95, 91, 88	ATL8C35219:31..1570	0.82	g3327036	31	237	5.6e-13	(AB014511) KIAA0611 protein [Homo sapiens]
151600	ATU013540	ATL8C16865:982..1	gap2	ATCEA4S8324	95	ATL8C16865:900..29	0.76	g2104535	31	532	4.8e-34	(AF001308) T10M13.13 [Arabidopsis thaliana]
151601	ATU013541	ATL8C12287:1..735	gap2	ATCEA4C585_1	95	ATL8C12287:420..716	0.73	g2154715	31	739	9.2e-67	(Y09418) CDPK-related protein kinase [Arabidopsis thaliana]
151602	ATU013542	ATL8C27612:1	gap2	ATCEA4S2993	95	ATL8C27612:8	0.73	g2191130	31	510		(AF007269)

		106..1				10..33						A_IG002N01.7 gene product [Arabidopsis thaliana]
151603	ATU013543	ATL8C5543:651..1230	gap2	ATCEA4C22380_1	95	ATL8C5543:682..885	0.71	g2827659	31	514	8.9e-42	(AL021637) putative protein [Arabidopsis thaliana]
151604	ATU013544	ATL8C2486:679..2838	gap2	ATCEA4C61_7, ATCEA4C61_8, ATCEA4S11506	95, 91, 83	ATL8C2486:2036..2602	0.67	g137578	31	253	1.9e-22	VICILIN PRECURSOR (ALPHA-GLOBULIN A) (CLONE GC72-A) [Saguinus oedipus]
151605	ATU013545	ATL8C38648:1502..1	gap2	ATCEA4C7581_1	95			g4689034	31	107	0.0016	(AJ133751) chloroplast ribosome recycling factor protein

												[Spinacia oleracea]
151606	ATU013546	ATL8C33977:398..967	gap2	ATCEA4C894_1	95			g1703200	31	273		PROTEIN KINASE AFC2 [Arabidopsis thaliana]
151607	ATU013547	ATL8C23177:879..1	gap2	ATCEA4C29424_1, ATCEA4S2703	95, 94			g3402757	31	1308	5.8e-125	(AL031187) receptor-like serine/threonine protein kinase ARK3 [Arabidopsis thaliana]
151608	ATU013548	ATL8C15467:1..1358	gap2	ATCEA4S34835	95			g3894385	31	90	0.071	(AF053994) Hcr2-0A [Lycopersicon esculentum]
151609	ATU013549	ATL8C15095:832..1	gap2	ATCEA4C118150_1	95			g4836883	31	267	1.1e-27	(AC007260) lcl|prt_seq No definition line

												found [Arabidopsis thaliana]
151610	ATU013550	ATL8C15101:291..915	gap2	ATCEA4S30182	95	ATL8C15101:291..895	0.98	g3128189	30	353	2.8e-38	(AC004521) putative beta-glucosidase [Arabidopsis thaliana]
151611	ATU013551	ATL8S13077:504..1	gap2	ATCEA4S11024	95	ATL8S13077:439..139	0.93	g2459445	30	101	3.4e-09	(AC002332) putative ribonucleoprotein [Arabidopsis thaliana]
151612	ATU013552	ATL8S19424:1..438	gap2	ATCEA4C20115_1	95	ATL8S19424:113..248	0.91	g2245025	30	335	4.7e-16	(Z97341) decarboxylase homolog [Arabidopsis thaliana]
151613	ATU013553	ATL8C28229:1..1016	gap2	ATCEA4S12298	95	ATL8C28229:86..755	0.88	g3776559	30	336	7.9e-22	(AC005388) Strong similarity to gene

												F14J9.26 [Arabidopsis thaliana]
151614	ATU013554	ATL8C25285:718..1	gap2	ATCEA4C1889_1, ATCEA4S3369, ATCEA4C1889_2	95, 94, 82	ATL8C25285:405..101	0.78	g2641638	30	536	2.5e-32	(AF032883) AtJ3 [Arabidopsis thaliana]
151615	ATU013555	ATL8C28309:883..1	gap2	ATCEA4S10153	95	ATL8C28309:673..264	0.70	g4539314	30	1102	1.5e-101	(AL035679) kinesin like protein [Arabidopsis thaliana]
151616	ATU013556	ATL8S11643:1..530	gap2	ATCEA4C990_1, ATCEA4C991_1	95, 82	ATL8S11643:305..457	0.65	g1346387	30	439	1.7e-41	KNOTTED-LIKE HOMEOBOX PROTEIN 3 [Arabidopsis thaliana].
151617	ATU013557	ATL8C18162:1363..1	gap2	ATCEA4C2132_1	95	ATL8C18162:1347..457	0.54	g2316016	30	2011	1.3e-165	(U92650) MRP-like ABC transporter [Arabidopsis thaliana]

151618	ATU013558	ATL8C45948:873..376	gap2	ATCEA4S31896	95			g2244841	30	689	4.3e-67	(Z97337) hypothetical protein [Arabidopsis thaliana]
151619	ATU013559	ATL8C3098:1..424	gap2	ATCEA4S36339	95			g461453	30	170	4.5e-15	AUXIN-BINDING PROTEIN 1 PRECURSOR (ABP) [Arabidopsis thaliana]
151620	ATU013560	ATL8S30965:417..1	gap2	ATCEA4C32936_1, ATCEA4S12286	95, 90			g4544394	30	592	3.2e-45	(AC007047) hypothetical protein [Arabidopsis thaliana]
151621	ATU013561	ATL8C43340:3396..2333	gap2	ATCEA4S36275	95			g2252852	30	1469		(AF013294) similar to the cation transport ATPases family. [Arabi

												dopsis thaliana]
151622	ATU013562	ATL8C40149:988..477	gap2	ATCEA4S26587	95			g4580476	30	132	1.2e-10	(AC006081) unknown protein [Arabidopsis thaliana]
151623	ATU013563	ATL8C35252:1..533	gap2	ATCEA4S2548	95	ATL8C35252:75..533	1.00					
151624	ATU013564	ATL8C42731:532..1	gap2	ATCEA4S29649	95	ATL8C42731:532..244	1.00					
151625	ATU013565	ATL8C49473:1858..936	gap2	ATCEA4C80784_1	95	ATL8C49473:1655..1126	1.00					
151626	ATU013566	ATL8S10436:274..173	gap2	ATCEA4S10420	95	ATL8S10436:274..173	1.00					
151627	ATU013567	ATL8C42133:743..1	gap2	ATCEA4S36341	95	ATL8C42133:743..34	1.00					
151628	ATU013568	ATL8C34394:1054..1	gap2	ATCEA4C5661_1	95	ATL8C34394:886..15	1.00					
151629	ATU013569	ATL8C22578:542..1	gap2	ATCEA4C120201_1	95	ATL8C22578:542..29	1.00					
151630	ATU013570	ATL8C30652:1..587	gap2	ATCEA4C17467_1, ATCEA4S35632	95, 91	ATL8C30652:44..548	1.00					
151631	ATU013571	ATL8C23652:2	gap2	ATCEA4C15340	95, 86	ATL8C23652:1	0.99					

		187..40		_1, ATCEA4C116855_1		999..538						
151632	ATU013572	ATL8C12720:33..1521	gap2	ATCEA4C503_1, ATCEA4C503_7, ATCEA4C503_2, ATCEA4S31230, ATCEA4S7465, ATCEA4S25060, ATCEA4C503_4, ATCEA4C503_8, ATCEA4C503_3	94, 93, 89, 88, 87, 86, 85, 83, 83	ATL8C12720:337..1299	0.99	g1621539	100	1342	1.2e-140	(U28415) annexin-like protein [Arabidopsis thaliana]
151633	ATU013573	ATL8C7990:1..1705	gap2	ATCEA4C23915_1	95	ATL8C7990:1323..1578	0.99					
151634	ATU013574	ATL8C48810:2246..1227	gap2	ATCEA4S28733	95	ATL8C48810:1967..1386	0.99					
151635	ATU013575	ATL8C18114:115..865	gap2	ATCEA4C5608_1	95	ATL8C18114:400..865	0.99					
151636	ATU013576	ATL8C4099:2662..36	gap2	ATCEA4C55880_1	95	ATL8C4099:2667..36	0.98					

		15				15						
151637	ATU013577	ATL8C11559:148..440	gap2	ATCEA4S2633, ATCEA4C5327_1	95, 95	ATL8C11559:426..257	0.98					
151638	ATU013578	ATL8C19938:980..40	gap2	ATCEA4S446	95	ATL8C19938:504..49	0.98					
151639	ATU013579	ATL8C5017:3340..1033	gap2	ATCEA4S35739, ATCEA4S33840	94, 89	ATL8C5017:3111..1203	0.98	g3335357	100	1687	6.3e-176	(AC003028) putative diphenol oxidase [Arabidopsis thaliana]
151640	ATU013580	ATL8C13843:7..849	gap2	ATCEA4S27138	94	ATL8C13843:401..568	0.98	g1785739	100	282	3.8e-27	(Y08502) orf240b [Arabidopsis thaliana]
151641	ATU013581	ATL8S873:1..227	gap2	ATCEA4C812_1	95	ATL8S873:225..11	0.98					
151642	ATU013582	ATL8C42837:1..2640	gap2	ATCEA4S26994, ATCEA4C8484_1	95, 92	ATL8C42837:67..2640	0.98					
151643	ATU013583	ATL8C23318:2173..1178	gap2	ATCEA4C23216_1	95	ATL8C23318:2078..1178	0.98					
151644	ATU013584	ATL8C30447:1	gap2	ATCEA4C6325_	95, 91,	ATL8C30447:1	0.98					

		532..44		2, ATCEA4C6325_7, ATCEA4S14494, ATCEA4S13303, ATCEA4S30196, ATCEA4S14066, ATCEA4S13883, ATCEA4S23130, ATCEA4S13844, ATCEA4S6237, ATCEA4S25738, ATCEA4S3182	85, 84, 84, 83, 83, 83, 82, 82, 82, 82	502..44						
151645	ATU013585	ATL8C36829:598..9	gap2	ATCEA4C474101	95	ATL8C36829:395..9	0.98					
151646	ATU013586	ATL8C41600:497..897	gap2	ATCEA4S31390, ATCEA4S27533, ATCEA4C188371	95, 95, 85	ATL8C41600:747..788	0.98					
151647	ATU013	ATL8C4	gap2	ATCEA4	95, 92	ATL8C4	0.98					

	587	666:681..129		S35909, ATCEA4C150833_1		666:681..321						
151648	ATU013588	ATL8S5520:446..33	gap2	ATCEA4S34124	95	ATL8S5520:297..33	0.98					
151649	ATU013589	ATL8S29141:31..451	gap2	ATCEA4S6267, ATCEA4S10474	95, 82	ATL8S29141:118..451	0.98					
151650	ATU013590	ATL8S29520:297..5	gap2	ATCEA4C18420_1	95	ATL8S29520:280..5	0.98					
151651	ATU013591	ATL8C27835:1..914	gap2	ATCEA4C38414_3, ATCEA4S34766, ATCEA4C38414_2, ATCEA4C38414_1	95, 90, 89, 85	ATL8C27835:118..646	0.98					
151652	ATU013592	ATL8C29056:54..555	gap2	ATCEA4C8351_1	95	ATL8C29056:343..529	0.98					
151653	ATU013593	ATL8C19263:559..1	gap2	ATCEA4S7175	95	ATL8C19263:559..132	0.97					
151654	ATU013594	ATL8C39351:1..456	gap2	ATCEA4S12797	95	ATL8C39351:263..456	0.97					
151655	ATU013595	ATL8C39153:2854..1	gap2	ATCEA4C121756_1, ATCEA4S33282	95, 92, 84, 82	ATL8C39153:2854..87	0.97					

				, ATCEA4 S34610 , ATCEA4 S12259								
151656	ATU013 596	ATL8S1 2398:1 ..166	gap2	ATCEA4 C69952 _1	95	ATL8S1 2398:1 5..164	0.97					
151657	ATU013 597	ATL8S3 309:54 6..57	gap2	ATCEA4 S2330	95	ATL8S3 309:24 6..57	0.97					
151658	ATU013 598	ATL8C1 4622:8 94..1	gap2	ATCEA4 C8343_ 1	95	ATL8C1 4622:8 94..18 1	0.97					
151659	ATU013 599	ATL8C2 4725:1 ..710	gap2	ATCEA4 S24137	95	ATL8C2 4725:1 01..59 4	0.97					
151660	ATU013 600	ATL8C1 5748:1 552..8 6	gap2	ATCEA4 C11838 _1	95	ATL8C1 5748:1 552..3 14	0.97					
151661	ATU013 601	ATL8C1 3790:8 50..13 55	gap2	ATCEA4 S33090 , ATCEA4 C11590 5_1	95, 93	ATL8C1 3790:1 311..1 051	0.97					
151662	ATU013 602	ATL8S1 9875:1 83..54 7	gap2	ATCEA4 C64073 _1	95	ATL8S1 9875:2 11..52 9	0.97					
151663	ATU013 603	ATL8C1 9835:1 96..82 4	gap2	ATCEA4 S35688 , ATCEA4 S2994	95, 83	ATL8C1 9835:1 96..77 1	0.97					
151664	ATU013 604	ATL8C4 5000:1 166..1 1	gap2	ATCEA4 S1750	95	ATL8C4 5000:1 121..1 1	0.97					
151665	ATU013	ATL8C4	gap2	ATCEA4	95,	ATL8C4	0.97					

	605	6322:1046..1		C1619_4, ATCEA4C1619_3, ATCEA4C1619_2	90, 87	6322:1046..162						
151666	ATU013606	ATL8C35767:884..7	gap2	ATCEA4S2876	95	ATL8C35767:775..7	0.97					
151667	ATU013607	ATL8C14470:916..2821	gap2	ATCEA4C12397_1, ATCEA4S11256	95, 84	ATL8C14470:1013..2821	0.97					
151668	ATU013608	ATL8C10115:603..93	gap2	ATCEA4S34595	95	ATL8C10115:397..93	0.97					
151669	ATU013609	ATL8C18409:977..345	gap2	ATCEA4C515_5, ATCEA4S31424, ATCEA4C515_7, ATCEA4C515_1, ATCEA4S18938, ATCEA4S31678, ATCEA4S6121	95, 95, 95, 94, 93, 91, 83	ATL8C18409:345..977	0.97					
151670	ATU013610	ATL8C14421:10..557	gap2	ATCEA4C90676_1	95	ATL8C14421:10..356	0.97					
151671	ATU013611	ATL8C20348:3	gap2	ATCEA4C74_1,	95, 87,	ATL8C20348:1	0.96					

		6..1380		ATCEA4S12530, ATCEA4C66440_1, ATCEA4S18015, ATCEA4S12962	84, 84, 83	12..873						
151672	ATU013612	ATL8C6793:132..1478	gap2	ATCEA4S4147	95	ATL8C6793:1478..132	0.96					
151673	ATU013613	ATL8S25046:538..146	gap2	ATCEA4S36356	95	ATL8S25046:538..151	0.96					
151674	ATU013614	ATL8C10758:538..2751	gap2	ATCEA4C16466_1, ATCEA4C41134_1, ATCEA4S7395	94, 92, 86	ATL8C10758:624..2709	0.96	g2911799	100	821	7.2e-91	(AF008184) 4-coumarate:CoA ligase 1 [Populus balsamifera subsp. trichocarpa X Populus deltoides]
151675	ATU013615	ATL8C48053:1899..41	gap2	ATCEA4S997	95	ATL8C48053:1588..41	0.96					
151676	ATU013	ATL8C1	gap2	ATCEA4	95, 94	ATL8C1	0.96					

	616	7907:1963..390		C17154_1, ATCEA4S33414		7907:1901..596						
151677	ATU013617	ATL8C30078:1..798	gap2	ATCEA4S27370, ATCEA4S23958, ATCEA4C11923_1	95, 92, 91	ATL8C30078:323..523	0.96					
151678	ATU013618	ATL8C34875:876..1	gap2	ATCEA4C13907_1, ATCEA4S11348	95, 86	ATL8C34875:610..23	0.96					
151679	ATU013619	ATL8C23036:602..141	gap2	ATCEA4S13271	95	ATL8C23036:458..141	0.96					
151680	ATU013620	ATL8C21255:118..1064	gap2	ATCEA4C4410_1, ATCEA4S31302, ATCEA4S31641, ATCEA4S31088	95, 95, 92, 84	ATL8C21255:118..884	0.96					
151681	ATU013621	ATL8C44647:2636..907	gap2	ATCEA4C5186_1, ATCEA4C105945_1, ATCEA4S31019	95, 94, 90	ATL8C44647:2397..1099	0.96					
151682	ATU013622	ATL8C11447:1..1314	gap2	ATCEA4C17052_1	95	ATL8C11447:53..131	0.95					

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151683	ATU013623	ATL8C43665:1..327	gap2	ATCEA4C3524_1	95	ATL8C43665:173..280	0.95					
151684	ATU013624	ATL8C7140:1485..1	gap2	ATCEA4C35438_1	95	ATL8C7140:1485..36	0.95					
151685	ATU013625	ATL8C49199:933..537	gap2	ATCEA4C79733_1	95	ATL8C49199:933..537	0.95					
151686	ATU013626	ATL8C35646:2354..140	gap2	ATCEA4S1386	95	ATL8C35646:2299..140	0.95					
151687	ATU013627	ATL8S25351:33..423	gap2	ATCEA4C44738_1	95	ATL8S25351:205..347	0.95					
151688	ATU013628	ATL8C8256:694..91	gap2	ATCEA4C16380_1	95	ATL8C8256:562..404	0.95					
151689	ATU013629	ATL8C11201:702..150	gap2	ATCEA4S36137	95	ATL8C11201:627..150	0.95					
151690	ATU013630	ATL8C8905:2802..309	gap2	ATCEA4C123191_1	94	ATL8C8905:2802..309	0.95	g4056480	100	247	1.6e-17	(AC005896) putative adenylate kinase [Arabidopsis thaliana]
151691	ATU013631	ATL8S29168:173..70	gap2	ATCEA4C2011_1	95	ATL8S29168:161..70	0.95					
151692	ATU013632	ATL8C6119:366..1	gap2	ATCEA4S11372	95	ATL8C6119:182..10	0.95					

151693	ATU0133	ATL8C19952:391..18	gap2	ATCEA4S552	95	ATL8C19952:301..18	0.95					
151694	ATU0134	ATL8C38420:578..60	gap2	ATCEA4C119801_1	95	ATL8C38420:578..64	0.95					
151695	ATU0135	ATL8C15636:1..539	gap2	ATCEA4C33543_1	95	ATL8C15636:159..539	0.95					
151696	ATU0136	ATL8C30461:540..54	gap2	ATCEA4C17968_1	95	ATL8C30461:504..54	0.95					
151697	ATU0137	ATL8S5121:203..581	gap2	ATCEA4S5182, ATCEA4S35925	95, 90	ATL8S5121:538..377	0.94					
151698	ATU0138	ATL8C3462:2119..293	gap2	ATCEA4S2657	94	ATL8C3462:2089..293	0.94	g2498731	100	1388	3.5e-147	PROBABLE NADP-DEPENDENT OXIDOREDUCTASE P1 [Arabidopsis thaliana]
151699	ATU0139	ATL8C22088:869..26	gap2	ATCEA4S3150	95	ATL8C22088:857..26	0.94					
151700	ATU0140	ATL8S20214:66..580	gap2	ATCEA4S31325	95	ATL8S20214:666..578	0.94					
151701	ATU0141	ATL8C44234:614..1	gap2	ATCEA4C17419_1, ATCEA4S14665	95, 83	ATL8C44234:588..428	0.94					
151702	ATU0142	ATL8S9222:571..1	gap2	ATCEA4C23439_1, ATCEA4	95, 88	ATL8S9222:341..96	0.94					

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151703	ATU0136 43	ATL8C37778:3661..2407	gap2	ATCEA4S36074, ATCEA4S30461	95, 93	ATL8C37778:3630..2633	0.94					
151704	ATU0136 44	ATL8C20313:90..640	gap2	ATCEA4C119774_1	95	ATL8C20313:90..421	0.94					
151705	ATU0136 45	ATL8S29621:528..113	gap2	ATCEA4C65616_1, ATCEA4S35064	95, 94	ATL8S29621:432..257	0.94					
151706	ATU0136 46	ATL8C23947:176..2757	gap2	ATCEA4S21564, ATCEA4S34827	95, 89	ATL8C23947:393..2117, ATL8C23947:2190..2757	0.94, 0.82					
151707	ATU0136 47	ATL8C31082:59..1190	gap2	ATCEA4S1002	95	ATL8C31082:60..1190	0.94					
151708	ATU0136 48	ATL8S15654:653..7	gap2	ATCEA4S5210	95	ATL8S15654:511..28	0.94					
151709	ATU0136 49	ATL8C31062:598..2720	gap2	ATCEA4C1575_5, ATCEA4S34528, ATCEA4S32002	95, 94, 93	ATL8C31062:1025..2716	0.94					
151710	ATU0136 50	ATL8C35648:563..6118	gap2	ATCEA4C144684_1	95	ATL8C35648:563..5986	0.94					
151711	ATU0136 51	ATL8S11981:570..21	gap2	ATCEA4C7715_1	95	ATL8S11981:370..22	0.93					

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151712	ATU0136 52	ATL8C3 722:16 48..27 49	gap2	ATCEA4 C29538 _1	95	ATL8C3 722:17 03..26 22	0.93					
151713	ATU0136 53	ATL8C1 248:1. .911	gap2	ATCEA4 S4381	95	ATL8C1 248:75 ..911	0.93					
151714	ATU0136 54	ATL8C1 646:1. .2528	gap2	ATCEA4 S35939 , ATCEA4 C799 1	95, 90	ATL8C1 646:12 5..249 2	0.93					
151715	ATU0136 55	ATL8C4 0309:7 07..1	gap2	ATCEA4 S2774, ATCEA4 S14868	95, 95	ATL8C4 0309:6 66..52	0.93					
151716	ATU0136 56	ATL8C4 929:58 ..2032	gap2	ATCEA4 S32210 , ATCEA4 S31445	95, 92	ATL8C4 929:58 ..2010	0.93					
151717	ATU0136 57	ATL8C2 3547:1 71..13 32	gap2	ATCEA4 C11673 1_1	95	ATL8C2 3547:1 71..13 32	0.93					
151718	ATU0136 58	ATL8S7 518:41 1..555	gap2	ATCEA4 C47706 _1	95	ATL8S7 518:49 0..551	0.93					
151719	ATU0136 59	ATL8S2 8253:2 95..55 2	gap2	ATCEA4 S36248	95	ATL8S2 8253:3 37..53 4	0.93					
151720	ATU0136 60	ATL8C2 798:35 15..30 93	gap2	ATCEA4 S7279	95	ATL8C2 798:34 58..31 06	0.93					
151721	ATU0136 61	ATL8C1 2446:2 761..6 77	gap2	ATCEA4 C46961 _1, ATCEA4 C13075 _1, ATCEA4	94, 91, 85	ATL8C1 2446:2 534..7 96	0.93	g22621 59	100	605	3.0e-59	(AC002 329) predic ted protei n simila

				S12964								r to S.pombe protein C5H10.03 [Arabidopsis thaliana]
151722	ATU013662	ATL8C25310:1705..70	gap2	ATCEA4C18903_1	95	ATL8C25310:1705..139	0.93					
151723	ATU013663	ATL8C14945:1..634	gap2	ATCEA4S5907	95	ATL8C14945:230..634	0.92					
151724	ATU013664	ATL8C9874:71..2140	gap2	ATCEA4S3652	95	ATL8C9874:71..2140	0.92					
151725	ATU013665	ATL8S3698:462..321	gap2	ATCEA4S4903	95	ATL8S3698:454..325	0.92					
151726	ATU013666	ATL8C33611:776..1044	gap2	ATCEA4S888	95	ATL8C33611:853..965	0.92					
151727	ATU013667	ATL8C16178:302..1	gap2	ATCEA4S29619	95	ATL8C16178:302..189	0.92					
151728	ATU013668	ATL8C46356:2938..1123	gap2	ATCEA4S35776, ATCEA4C13916_1	94, 93	ATL8C46356:2868..1123	0.92	g4455369	100	408	4.0e-42	(AL035524) hypothetical protein [Arabidopsis thaliana]
151729	ATU013	ATL8C3	gap2	ATCEA4	95	ATL8C3	0.92					

	669	7444:693..1740		C499_1		7444:764..1728						
151730	ATU013670	ATL8C49236:440..35	gap2	ATCEA4S13001	95	ATL8C49236:434..71	0.91					
151731	ATU013671	ATL8C11183:1..340	gap2	ATCEA4S7075	95	ATL8C11183:89..340	0.91					
151732	ATU013672	ATL8C24188:1557..1	gap2	ATCEA4C92759_1, ATCEA4S7286	94, 93	ATL8C24188:1417..203	0.91	g1171130	100	258	3.7e-17	(U24657) putative O-methyltransferase [Myxococcus xanthus]
151733	ATU013673	ATL8C24990:1..652	gap2	ATCEA4C43414_1	95	ATL8C24990:217..652	0.91					
151734	ATU013674	ATL8C30245:743..1	gap2	ATCEA4C23666_1	95	ATL8C30245:743..24	0.91					
151735	ATU013675	ATL8C11831:1524..9	gap2	ATCEA4C24758_1, ATCEA4S35901	95, 83	ATL8C11831:1240..9	0.91					
151736	ATU013676	ATL8C2846:1759..1487	gap2	ATCEA4C49531_1, ATCEA4S6416	95, 85	ATL8C2846:1656..1487	0.91					
151737	ATU013677	ATL8C49765:2694..1	gap2	ATCEA4C44005_1	94	ATL8C49765:2694..269	0.91	g3377817	100	975	3.1e-109	(AF076275) contains similarity to

												C3HC4-type zinc fingers (Pfam: zf-C3HC4.hmm, score: 29.48) [Arabidopsis thaliana]
151738	ATU013678	ATL8C5444:54..2030	gap2	ATCEA4S34352, ATCEA4C131560_1	94, 91	ATL8C5444:535..1947	0.90	g4544464	100	417	6.0e-21	(AC006580) putative chloroplast nucleoid DNA binding protein [Arabidopsis thaliana]
151739	ATU013679	ATL8S19201:206..1	gap2	ATCEA4C161493_1	95	ATL8S19201:206..45	0.90					
151740	ATU013680	ATL8C19204:3218..4454	gap2	ATCEA4S31386, ATCEA4C118057_1	95, 94	ATL8C19204:3218..4417	0.90					
151741	ATU013681	ATL8C8814:2575..731	gap2	ATCEA4C32517_1	95	ATL8C8814:2575..731	0.90					

151742	ATU013682	ATL8C11584:168..547	gap2	ATCEA4C679_1, ATCEA4C679_3	95, 84	ATL8C11584:368..424	0.90					
151743	ATU013683	ATL8C5575:45..918	gap2	ATCEA4S3011	95	ATL8C5575:45..918	0.90					
151744	ATU013684	ATL8C25861:264..1057	gap2	ATCEA4S3222	95	ATL8C25861:264..1057	0.90					
151745	ATU013685	ATL8C21788:2733..920	gap2	ATCEA4S26836, ATCEA4C4304_1, ATCEA4C47932_3, ATCEA4C47932_1, ATCEA4C47932_2, ATCEA4S31242	94, 93, 90, 90, 83, 82	ATL8C21788:2612..920	0.90	g11705055	100	701	1.8e-70	MYO-INOSITOL 4-O-METHYLTRANSFERASE [Mesembryanthemum crystallinum]
151746	ATU013686	ATL8C28906:1..330	gap2	ATCEA4C932_1	95	ATL8C28906:48..128	0.90					
151747	ATU013687	ATL8C11104:1987..773	gap2	ATCEA4C5718_1	95	ATL8C11104:1908..773	0.90					
151748	ATU013688	ATL8C34539:143..642	gap2	ATCEA4C149791_1	95	ATL8C34539:526..642	0.90					
151749	ATU013689	ATL8C4835:67..937	gap2	ATCEA4C5439_1, ATCEA4	95, 94, 86, 84	ATL8C4835:158..930	0.90					

				C5439_3, ATCEA4S27299, ATCEA4S9540								
151750	ATU013690	ATL8C19974:1..2256	gap2	ATCEA4C9432_1, ATCEA4C142471_1, ATCEA4C138969_1	95, 92, 90	ATL8C19974:336..2256	0.90					
151751	ATU013691	ATL8C12308:1010..11	gap2	ATCEA4S36108	95	ATL8C12308:1010..313	0.89					
151752	ATU013692	ATL8C20433:498..1000	gap2	ATCEA4C119121_1	95	ATL8C20433:498..848	0.89					
151753	ATU013693	ATL8C1428:2..2858	gap2	ATCEA4S2341	94	ATL8C1428:86..2858	0.89	g4567304	100	985	1.6e-84	(AC005956) unknown protein [Arabidopsis thaliana]
151754	ATU013694	ATL8C34892:59..1343	gap2	ATCEA4C102196_1	95	ATL8C34892:59..768	0.89					
151755	ATU013695	ATL8C45667:4348..323	gap2	ATCEA4S31131, ATCEA4C35409_1,	95, 93, 88, 87	ATL8C45667:4348..548	0.89					

				ATCEA4S2318, ATCEA4S752								
151756	ATU013696	ATL8S27582:583..1	gap2	ATCEA4C5510_1, ATCEA4C5510_2	95, 89	ATL8S27582:432..175	0.89					
151757	ATU013697	ATL8C40750:311..1	gap2	ATCEA4C615_1	95	ATL8C40750:306..65	0.89					
151758	ATU013698	ATL8C49810:1210..523	gap2	ATCEA4C107530_1, ATCEA4S33757	95, 94	ATL8C49810:1142..675	0.89					
151759	ATU013699	ATL8C4996:885..3720	gap2	ATCEA4C10666_1, ATCEA4S10799	94, 93	ATL8C4996:3720..938	0.89	g3881978	100	634	3.8e-49	(Y11348) annexin-like protein [Medicago sativa]
151760	ATU013700	ATL8S24523:1..499	gap2	ATCEA4C31081_2, ATCEA4S24890, ATCEA4C31081_1	95, 94, 91	ATL8S24523:46..325	0.89					
151761	ATU013701	ATL8C49749:6279..3663	gap2	ATCEA4C119136_1, ATCEA4C12638_1	95, 95	ATL8C49749:6279..3663	0.89					
151762	ATU013	ATL8C2	gap2	ATCEA4	95	ATL8C2	0.89					

	702	5135:1..162		S11142		5135:55..162						
151763	ATU0137703	ATL8C6241:2688..1723	gap2	ATCEA4C29985_1, ATCEA4C27995_1	95, 82	ATL8C6241:2889..1723	0.89					
151764	ATU0137704	ATL8C2642:816..1	gap2	ATCEA4C30186_1, ATCEA4C30186_2	95, 94	ATL8C2642:637..377	0.89					
151765	ATU0137705	ATL8C39092:459..1	gap2	ATCEA4C143566_1	95	ATL8C39092:459..29	0.88					
151766	ATU0137706	ATL8C9159:1385..646	gap2	ATCEA4C33766_1	95	ATL8C9159:1207..767	0.88					
151767	ATU0137707	ATL8C16766:3722..1	gap2	ATCEA4C52572_3, ATCEA4C52572_2	95, 87	ATL8C16766:3722..355	0.88					
151768	ATU0137708	ATL8C10678:274..1	gap2	ATCEA4S599	95	ATL8C10678:274..69	0.88					
151769	ATU0137709	ATL8C26169:2635..1664	gap2	ATCEA4S34795	95	ATL8C26169:2635..1664	0.88					
151770	ATU0137710	ATL8C37427:2474..426	gap2	ATCEA4S2901	95	ATL8C37427:2474..426	0.88					
151771	ATU0137711	ATL8C19579:1..445	gap2	ATCEA4C13355_1	95	ATL8C19579:348..423	0.88					
151772	ATU0137712	ATL8C38953:2	gap2	ATCEA4S35205	95, 90	ATL8C38953:2	0.88					

		048..1079		, ATCEA4S30882		009..1313						
151773	ATU013713	ATL8C922:2033..1	gap2	ATCEA4C3431_1, ATCEA4C104406_1, ATCEA4S3978	95, 94, 86	ATL8C922:1880..232	0.88					
151774	ATU013714	ATL8C4677:316..892	gap2	ATCEA4C31636_1	95	ATL8C4677:548..892	0.88					
151775	ATU013715	ATL8C17492:389..626	gap2	ATCEA4S961	95	ATL8C17492:389..601	0.88					
151776	ATU013716	ATL8C10291:3383..1395	gap2	ATCEA4C17688_1, ATCEA4S31285, ATCEA4S8928	95, 93, 83	ATL8C10291:3336..1395	0.88					
151777	ATU013717	ATL8C11556:257..612	gap2	ATCEA4S3469	95	ATL8C11556:393..601	0.88					
151778	ATU013718	ATL8S25814:137..554	gap2	ATCEA4S11948	95	ATL8S25814:137..416	0.88					
151779	ATU013719	ATL8C45997:599..212	gap2	ATCEA4S36243	95	ATL8C45997:599..212	0.88					
151780	ATU013720	ATL8C3347:774..17	gap2	ATCEA4C49909_1, ATCEA4S25302	95, 84	ATL8C3347:560..17	0.88					
151781	ATU013	ATL8C1	gap2	ATCEA4	94, 84	ATL8C1	0.87	g42043	100	796	6.3e-	(AC003

CLASSIFIED

	721	585:4184..7387		C15778_1, ATCEA4S14670		585:4184..7387		10			52	027) lcl|prt_seq No definition line found [Arabidopsis thaliana]
151782	ATU013722	ATL8C31003:2168..652	gap2	ATCEA4C73541_1, ATCEA4S35418	95, 92	ATL8C31003:2168..652	0.87					
151783	ATU013723	ATL8C22852:1..594	gap2	ATCEA4C10361_1, ATCEA4C116174_1, ATCEA4S11874	95, 93, 89	ATL8C22852:74..589	0.87					
151784	ATU013724	ATL8C3975:193..1423	gap2	ATCEA4C37490_1, ATCEA4C102529_2	95, 89	ATL8C3975:193..1358	0.87					
151785	ATU013725	ATL8C357:2150..42	gap2	ATCEA4S31013, ATCEA4S27027	95, 94	ATL8C357:2150..42	0.87					
151786	ATU013726	ATL8C44160:589..1	gap2	ATCEA4C4355_2, ATCEA4C4355_3, ATCEA4C4355_	95, 93, 92, 88, 82	ATL8C44160:555..17	0.87					

				5, ATCEA4 C4355_ 7, ATCEA4 C4355_ 6								
151787	ATU013 727	ATL8C4 2882:2 450..2 031	gap2	ATCEA4 C28125 _1, ATCEA4 C28125 _2	95, 90	ATL8C4 2882:2 357..2 253	0.87					
151788	ATU013 728	ATL8C1 561:66 7..198 1	gap2	ATCEA4 C4480_ 1, ATCEA4 S35417 , ATCEA4 S33999	95, 88, 83	ATL8C1 561:66 7..178 7	0.87					
151789	ATU013 729	ATL8C1 3103:3 116..1 159	gap2	ATCEA4 S3811	95	ATL8C1 3103:2 741..1 159	0.87					
151790	ATU013 730	ATL8C2 4875:2 494..1	gap2	ATCEA4 S2354	95	ATL8C2 4875:2 494..1 75	0.87					
151791	ATU013 731	ATL8C3 2177:3 866..4 25	gap2	ATCEA4 S29710 , ATCEA4 S29717	94, 94	ATL8C3 2177:3 644..5 85	0.87	g33273 94	100	3633	0.0	(AC004 483) putati ve RNA helica se [Arabi dopsis thalia na]
151792	ATU013 732	ATL8C1 3636:4 19..12 2	gap2	ATCEA4 C11897 8_1	95	ATL8C1 3636:3 75..12 2	0.86					
151793	ATU013	ATL8C9	gap2	ATCEA4	94, 83	ATL8C9	0.86	g17551	100	929	2.1e-	(U7518

	733	835:1221..403		S34571, ATCEA4C2046_1		835:1210..583		52			86	7) germin-like protein [Arabidopsis thaliana]
151794	ATU013734	ATL8S3298:100..551	gap2	ATCEA4C125509_1, ATCEA4S32762, ATCEA4S27839	95, 92, 86	ATL8S3298:100..491	0.86					
151795	ATU013735	ATL8C4366:71..524	gap2	ATCEA4S10573	95	ATL8C4366:71..518	0.86					
151796	ATU013736	ATL8C36126:754..134	gap2	ATCEA4S13242	95	ATL8C36126:579..271	0.86					
151797	ATU013737	ATL8C43762:2226..147	gap2	ATCEA4S2001, ATCEA4S23404	95, 82	ATL8C43762:2226..147	0.86					
151798	ATU013738	ATL8C11401:1..2196	gap2	ATCEA4S6852	95	ATL8C11401:444..2196	0.86					
151799	ATU013739	ATL8C42957:421..61	gap2	ATCEA4C59871_1	95	ATL8C42957:249..61	0.86					
151800	ATU013740	ATL8C35691:513..652	gap2	ATCEA4C17442_1	95	ATL8C35691:542..642	0.86					
151801	ATU013741	ATL8C23315:129..492	gap2	ATCEA4C24668_1, ATCEA4S9388	95, 84	ATL8C23315:129..419	0.85					

151802	ATU0137 42	ATL8C1 125:78 ..1348	gap2	ATCEA4S26382, ATCEA4S26514, ATCEA4S15895, ATCEA4S19120	95, 88, 86, 82	ATL8C1 125:78 ..813	0.85					
151803	ATU0137 43	ATL8C1 1426:1 224..3 73	gap2	ATCEA4C14454_1	95	ATL8C1 1426:1 176..3 73	0.85					
151804	ATU0137 44	ATL8C3 2056:1 42..62 9	gap2	ATCEA4C1763_1	95	ATL8C3 2056:2 72..59 4	0.85					
151805	ATU0137 45	ATL8C4 9876:5 00..67 0	gap2	ATCEA4S36128	95	ATL8C4 9876:5 00..67 0	0.85					
151806	ATU0137 46	ATL8C2 6412:6 55..94 0	gap2	ATCEA4C23876_1	95	ATL8C2 6412:6 80..93 6	0.85					
151807	ATU0137 47	ATL8C2 7399:4 9..189 8	gap2	ATCEA4S5428	95	ATL8C2 7399:4 9..189 8	0.85					
151808	ATU0137 48	ATL8C1 4201:1 52..89 8	gap2	ATCEA4C151118_1	95	ATL8C1 4201:1 52..71 4	0.85					
151809	ATU0137 49	ATL8C4 2003:1 693..6 56	gap2	ATCEA4C21237_1	95	ATL8C4 2003:1 688..6 66	0.85					
151810	ATU0137 50	ATL8C3 5360:1 901..1 99	gap2	ATCEA4C119687_1	94	ATL8C3 5360:1 901..2 34	0.85	g3482910	100	1325	1.6e-140	(AC003970) Similar to rice

												water stress induced protein [Arabidopsis thaliana]
151811	ATU0137 51	ATL8C11943:1251..496	gap2	ATCEA4S23331	95	ATL8C11943:1251..902	0.85					
151812	ATU0137 52	ATL8C5621:782..46	gap2	ATCEA4S8135	95	ATL8C5621:586..46	0.85					
151813	ATU0137 53	ATL8C45446:6088..5052	gap2	ATCEA4S12828, ATCEA4S321	95, 92	ATL8C45446:6088..5728	0.84					
151814	ATU0137 54	ATL8C14385:583..122	gap2	ATCEA4S467	95	ATL8C14385:512..122	0.84					
151815	ATU0137 55	ATL8C30552:271..2244	gap2	ATCEA4C119416_1, ATCEA4S35058	95, 89	ATL8C30552:271..2041	0.84					
151816	ATU0137 56	ATL8C16233:930..48	gap2	ATCEA4S6039	95	ATL8C16233:703..48	0.84					
151817	ATU0137 57	ATL8C15462:873..258	gap2	ATCEA4C82101_1	95	ATL8C15462:856..258	0.84					
151818	ATU0137 58	ATL8C38202:1..811	gap2	ATCEA4C245_1	95	ATL8C38202:70..552	0.84					
151819	ATU0137 59	ATL8C39672:482..1	gap2	ATCEA4C29527_1	95	ATL8C39672:482..31	0.84					

						8						
151820	ATU0137 60	ATL8S20 498:566..1	gap2	ATCEA4C1946_1, ATCEA4S7860	95, 86	ATL8S20 498:524..25	0.84					
151821	ATU0137 61	ATL8C18 052:4692..3038	gap2	ATCEA4C65661_1, ATCEA4C22587_1	95, 93	ATL8C18 052:4403..3038	0.84					
151822	ATU0137 62	ATL8C47 965:81..1124	gap2	ATCEA4C101130_1, ATCEA4S24681	95, 94	ATL8C47 965:81..1124	0.84					
151823	ATU0137 63	ATL8C21 90:866..24	gap2	ATCEA4S8381	95	ATL8C21 90:866..24	0.84					
151824	ATU0137 64	ATL8C47 640:300..769	gap2	ATCEA4C57640_1	95	ATL8C47 640:405..599	0.84					
151825	ATU0137 65	ATL8C25 38:450..1502	gap2	ATCEA4C51380_1	95	ATL8C25 38:536..1502	0.83					
151826	ATU0137 66	ATL8C36 766:1178..155	gap2	ATCEA4C95524_1	95	ATL8C36 766:1178..571	0.83					
151827	ATU0137 67	ATL8C26 2:1638..74	gap2	ATCEA4C6990_1	95	ATL8C26 2:1409..222	0.83					
151828	ATU0137 68	ATL8C44 226:4509..1	gap2	ATCEA4S33268, ATCEA4C131175_1	94, 93	ATL8C44 226:4509..289	0.83	g3860262, g1723187	100, 92	1556, 1416	6.3e-161, 2.0e-123	(AC005824) unknown protein [Arabidopsis thalia

SUBSTITUTE SHEET (RULE 26)

												na]; 112.3 KD PROTEIN IN PYK1-SNC1 INTERGENIC REGION [Saccharomyces cerevisiae]
151829	ATU013769	ATL8C33229:1435..399	gap2	ATCEA4C5991_1	95	ATL8C33229:1193..399	0.83					
151830	ATU013770	ATL8S2775:415..1	gap2	ATCEA4S14542	95	ATL8S2775:415..66	0.83					
151831	ATU013771	ATL8C9696:1297..324	gap2	ATCEA4C19396_1	95	ATL8C9696:1268..324	0.83					
151832	ATU013772	ATL8C4539:6..493	gap2	ATCEA4S13340	95	ATL8C4539:6..475	0.83					
151833	ATU013773	ATL8C44355:11453..1	gap2	ATCEA4S33339, ATCEA4C138862_1, ATCEA4S31637	95, 92, 85	ATL8C44355:11453..91	0.83					
151834	ATU013774	ATL8C17010:11799..109	gap2	ATCEA4S11164, ATCEA4C5565_1	95, 90	ATL8C17010:11685..109	0.83					
151835	ATU013	ATL8C1	gap2	ATCEA4	95	ATL8C1	0.83					

	775	6769:70..2372		S12801		6769:2372..70						
151836	ATU013776	ATL8C29386:1499..177	gap2	ATCEA4C127573_1	95	ATL8C29386:1491..177	0.83					
151837	ATU013777	ATL8C45178:21..458	gap2	ATCEA4C65268_1	95	ATL8C45178:146..433	0.82					
151838	ATU013778	ATL8C26524:714..1696	gap2	ATCEA4C4636_1	95	ATL8C26524:803..1696	0.82					
151839	ATU013779	ATL8C26324:540..240	gap2	ATCEA4S3788	95	ATL8C26324:540..256	0.82					
151840	ATU013780	ATL8C46238:1..1871	gap2	ATCEA4C953_1	95	ATL8C46238:192..1861	0.82					
151841	ATU013781	ATL8C24686:373..1424	gap2	ATCEA4C116681_1	95	ATL8C24686:406..1424	0.82					
151842	ATU013782	ATL8C16033:4470..3062	gap2	ATCEA4S11660, ATCEA4C50585_1, ATCEA4C153924_1, ATCEA4S6927	94, 93, 92, 91	ATL8C16033:4003..3062	0.82	g3386614	100	1015	2.8e-75	(AC004665) putative transcription factor SF3 [Arabidopsis thaliana]
151843	ATU013783	ATL8C12661:126..2861	gap2	ATCEA4C116427_1, ATCEA4	95, 94, 89	ATL8C12661:126..2325	0.82					

				S29550, ATCEA4C11642_6_1								
151844	ATU013784	ATL8C47897:313..2326	gap2	ATCEA4S5930, ATCEA4S32064, ATCEA4S1955, ATCEA4C23745_1, ATCEA4S35426	94, 89, 88, 86, 84	ATL8C47897:313..2224	0.82	g3643611, g3643607	100, 31	954, 132	9.3e-100, 1.6e-09	(AC005395) putative casein kinase [Arabidopsis thaliana]; (AC005395) unknown protein [Arabidopsis thaliana]
151845	ATU013785	ATL8C44594:744..1	gap2	ATCEA4C8198_1	95	ATL8C44594:542..113	0.82					
151846	ATU013786	ATL8C36793:1..382	gap2	ATCEA4C32296_1	95	ATL8C36793:80..369	0.82					
151847	ATU013787	ATL8C9912:893..26	gap2	ATCEA4S1664, ATCEA4C12266_1, ATCEA4C12798_1	95, 85, 83	ATL8C9912:798..26	0.82					
151848	ATU013788	ATL8C35697:1..4388	gap2	ATCEA4C2588_1, ATCEA4	95, 94	ATL8C35697:74..4388	0.82					

				S32983								
151849	ATU0137 89	ATL8C33469:1..733	gap2	ATCEA4C51318_1	95	ATL8C33469:46..145	0.81					
151850	ATU0137 90	ATL8C20403:1056..199	gap2	ATCEA4C7715_1	95	ATL8C20403:1056..208	0.81					
151851	ATU0137 91	ATL8C47251:81..708	gap2	ATCEA4S5625	95	ATL8C47251:153..708	0.81					
151852	ATU0137 92	ATL8C14964:1..696	gap2	ATCEA4C101225_2	95	ATL8C14964:45..269	0.81					
151853	ATU0137 93	ATL8C33514:524..1373	gap2	ATCEA4C12369_1	95	ATL8C33514:524..1373	0.81					
151854	ATU0137 94	ATL8C12975:791..169	gap2	ATCEA4S2615, ATCEA4C25101_1	95, 87	ATL8C12975:701..169	0.81					
151855	ATU0137 95	ATL8C33779:1239..45	gap2	ATCEA4C18649_1, ATCEA4S34905	95, 95	ATL8C33779:1090..95	0.81					
151856	ATU0137 96	ATL8C32235:113..2637	gap2	ATCEA4C64911_1, ATCEA4S11342	95, 93	ATL8C32235:113..2629	0.80					
151857	ATU0137 97	ATL8C34771:1354..1657	gap2	ATCEA4C45990_1	95	ATL8C34771:1453..1601	0.80					
151858	ATU0137 98	ATL8C10847:2671..585	gap2	ATCEA4S947	95	ATL8C10847:2623..585	0.80					
151859	ATU0137 99	ATL8C776:263	gap2	ATCEA4C3176	95	ATL8C776:259	0.80					

		1..1591		1		8..1739						
151860	ATU0138 00	ATL8C30764:245..1	gap2	ATCEA4C19462_1	95	ATL8C30764:135..30	0.80					
151861	ATU0138 01	ATL8C13015:633..139	gap2	ATCEA4C12441_3, ATCEA4S16045	95, 91	ATL8C13015:554..278	0.80					
151862	ATU0138 02	ATL8C41046:231..879	gap2	ATCEA4S5220, ATCEA4S14420, ATCEA4S33572	95, 94, 89	ATL8C41046:246..333	0.80					
151863	ATU0138 03	ATL8C17701:2000..16	gap2	ATCEA4S7401, ATCEA4S34258	95, 93	ATL8C17701:1847..16	0.80					
151864	ATU0138 04	ATL8C7995:164..1457	gap2	ATCEA4C22142_1	95	ATL8C7995:164..1457	0.80					
151865	ATU0138 05	ATL8C4931:567..11	gap2	ATCEA4C3157_1	95	ATL8C4931:402..11	0.80					
151866	ATU0138 06	ATL8C10602:572..1	gap2	ATCEA4C468_1, ATCEA4S33008	95, 90	ATL8C10602:572..21	0.80					
151867	ATU0138 07	ATL8C23532:1..855	gap2	ATCEA4C11136_1, ATCEA4S2534	95, 92	ATL8C23532:327..855	0.80					
151868	ATU0138 08	ATL8C40903:1..935	gap2	ATCEA4C31296_1, ATCEA4C12318_1	95, 87	ATL8C40903:931..113	0.80					

151869	ATU013809	ATL8C40180:273..80	gap2	ATCEA4C32733_1	95	ATL8C40180:273..80	0.80					
151870	ATU013810	ATL8C37155:1391..3858	gap2	ATCEA4S30741	94	ATL8C37155:1397..3852	0.79	g4531442	100	1106		(AC006224) hypothetical protein [Arabidopsis thaliana]
151871	ATU013811	ATL8C7345:743..1875	gap2	ATCEA4S30492	95	ATL8C7345:977..1875	0.79					
151872	ATU013812	ATL8C395:1002..1	gap2	ATCEA4S46	95	ATL8C395:1002..14	0.79					
151873	ATU013813	ATL8C21528:787..2288	gap2	ATCEA4S32794, ATCEA4C118755_2	95, 94	ATL8C21528:787..2288	0.79					
151874	ATU013814	ATL8S30281:209..529	gap2	ATCEA4S13799	95	ATL8S30281:209..374	0.79					
151875	ATU013815	ATL8C36027:1063..353	gap2	ATCEA4C41172_1	95	ATL8C36027:1019..353	0.79					
151876	ATU013816	ATL8C46792:1108..434	gap2	ATCEA4C20440_1, ATCEA4S35507	95, 88	ATL8C46792:1074..434	0.79					
151877	ATU013817	ATL8C13911:2195..75	gap2	ATCEA4C4570_1, ATCEA4C7446	95, 92	ATL8C13911:2110..75	0.79					

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151878	ATU013818	ATL8C42635:1097..232	gap2	ATCEA4C23248_1	95	ATL8C42635:921..401	0.79					
151879	ATU013819	ATL8C16211:1799..1	gap2	ATCEA4C125784_1	95	ATL8C16211:1799..678	0.79					
151880	ATU013820	ATL8C33025:1152..3275	gap2	ATCEA4C133900_1, ATCEA4C35300_1	95, 94	ATL8C33025:1176..3275	0.79					
151881	ATU013821	ATL8C346:649..2970	gap2	ATCEA4C102354_1, ATCEA4S31954	94, 89	ATL8C346:770..2010	0.79	g4836883	100	600	1.2e-45	(AC007260) lcl|prt_seq No definition line found [Arabidopsis thaliana]
151882	ATU013822	ATL8C41931:1..244	gap2	ATCEA4C9350_1, ATCEA4S1021	95, 89	ATL8C41931:35..244	0.78					
151883	ATU013823	ATL8C11042:2892..55	gap2	ATCEA4S30972	94	ATL8C11042:2892..55	0.78	g586875	100	131	1.0e-08	HYPOTHETICAL 29.2 KD PROTEIN IN METS-KSGA INTERGENIC REGION

												[Bacillus subtilis]
151884	ATU0138 24	ATL8C7339:1062..2246	gap2	ATCEA4C16599_1	95	ATL8C7339:1145..2246	0.78					
151885	ATU0138 25	ATL8C21902:382..175	gap2	ATCEA4C6694_1	95	ATL8C21902:380..181	0.78					
151886	ATU0138 26	ATL8C30599:1708..1	gap2	ATCEA4C25086_1	95	ATL8C30599:1708..43	0.78					
151887	ATU0138 27	ATL8C32182:641..1218	gap2	ATCEA4S6698	95	ATL8C32182:641..932	0.78					
151888	ATU0138 28	ATL8C46491:707..1	gap2	ATCEA4C3928_2, ATCEA4S2040	95, 86	ATL8C46491:524..41	0.78					
151889	ATU0138 29	ATL8C47730:926..588	gap2	ATCEA4S35490	95	ATL8C47730:922..588	0.78					
151890	ATU0138 30	ATL8C10676:1..937	gap2	ATCEA4C5195_1	95	ATL8C10676:53..907	0.78					
151891	ATU0138 31	ATL8C42737:112..1879	gap2	ATCEA4S11207	95	ATL8C42737:1879..112	0.78					
151892	ATU0138 32	ATL8C42359:1512..131	gap2	ATCEA4S31734, ATCEA4C33820_3, ATCEA4S33935	95, 95, 91	ATL8C42359:1512..286	0.78					

151893	ATU013833	ATL8C14475:8084..170	gap2	ATCEA4S5698	94	ATL8C14475:7987..170	0.78	g3367535, g2292907	100, 83	1831, 2483	4.5e-186, 2.2e-249	(AC004392) F8K4.22 [Arabidopsis thaliana]; (Y10099) P-glycoprotein homologue [Horde um vulgare]
151894	ATU013834	ATL8C28172:1260..93	gap2	ATCEA4C1897_1	95	ATL8C28172:1144..93	0.77					
151895	ATU013835	ATL8C639:1244..4555	gap2	ATCEA4C6445_3, ATCEA4C6445_1, ATCEA4C6445_2	95, 87, 87	ATL8C639:1244..4555	0.77					
151896	ATU013836	ATL8C1832:84..2307	gap2	ATCEA4C118917_1	95	ATL8C1832:2307..84	0.77					
151897	ATU013837	ATL8C39571:2196..473	gap2	ATCEA4C1653_1	95	ATL8C39571:2196..473	0.77					
151898	ATU013838	ATL8C15485:3482..1408	gap2	ATCEA4C1259_1, ATCEA4S10179,	95, 84, 82	ATL8C15485:3404..1744	0.77					

				ATCEA4C1259_3								
151899	ATU013839	ATL8C4316:24..832	gap2	ATCEA4S7254	95	ATL8C4316:65..832	0.77					
151900	ATU013840	ATL8C21978:4127..2745	gap2	ATCEA4S4817	95	ATL8C21978:3958..2745	0.77					
151901	ATU013841	ATL8C22990:570..3875	gap2	ATCEA4S26789, ATCEA4C115674_1, ATCEA4S19904, ATCEA4S35979, ATCEA4S26844	94, 94, 92, 92, 88	ATL8C22990:570..3508	0.77	g3377817	100	1317	3.5e-137	(AF076275) contains similarity to C3HC4-type zinc fingers (Pfam: zf-C3HC4.hmm, score: 29.48) [Arabidopsis thaliana]
151902	ATU013842	ATL8C14225:873..582	gap2	ATCEA4C8817_1, ATCEA4S23857	95, 94	ATL8C14225:853..783	0.76					
151903	ATU013843	ATL8C19617:1540..68	gap2	ATCEA4C70373_1, ATCEA4S13447, ATCEA4	95, 93, 91, 87	ATL8C19617:1208..277	0.76					

				C49938_1, ATCEA4S25903								
151904	ATU013844	ATL8C48952:3..720	gap2	ATCEA4S7407	95	ATL8C48952:3..720	0.76					
151905	ATU013845	ATL8C43139:1485..1680	gap2	ATCEA4C109123_1, ATCEA4S31575	95, 89	ATL8C43139:1563..1622	0.76					
151906	ATU013846	ATL8C37318:276..1696	gap2	ATCEA4S30503	95	ATL8C37318:588..1696	0.76					
151907	ATU013847	ATL8S15128:526..1	gap2	ATCEA4S6328	95	ATL8S15128:477..134	0.76					
151908	ATU013848	ATL8C8904:1846..171	gap2	ATCEA4C17668_1	95	ATL8C8904:1846..420	0.75					
151909	ATU013849	ATL8S6938:243..1	gap2	ATCEA4C43848_1	95	ATL8S6938:243..12	0.75					
151910	ATU013850	ATL8C15514:5877..3173	gap2	ATCEA4S26864, ATCEA4C58262_2, ATCEA4C58262_1	95, 91, 84	ATL8C15514:5877..3415	0.75					
151911	ATU013851	ATL8C49379:945..2476	gap2	ATCEA4C1514_1	95	ATL8C49379:1756..2316	0.75					
151912	ATU013852	ATL8C48043:46..1437	gap2	ATCEA4C365_1	95	ATL8C48043:328..1301	0.75					

151913	ATU0138 53	ATL8C11132:1..537	gap2	ATCEA4C12119_1	95	ATL8C11132:165..455	0.75					
151914	ATU0138 54	ATL8S28708:1..211	gap2	ATCEA4S2464	95	ATL8S28708:78..211	0.75					
151915	ATU0138 55	ATL8C31337:945..2225	gap2	ATCEA4S1228	95	ATL8C31337:945..2225	0.75					
151916	ATU0138 56	ATL8C39082:1772..129	gap2	ATCEA4S1642	95	ATL8C39082:1772..129	0.75					
151917	ATU0138 57	ATL8C14473:1605..3087	gap2	ATCEA4C8681_1	95	ATL8C14473:1605..3087	0.74					
151918	ATU0138 58	ATL8C27701:232..1340	gap2	ATCEA4C44660_1, ATCEA4C44660_2, ATCEA4S13640	95, 94, 92	ATL8C27701:232..1135	0.74					
151919	ATU0138 59	ATL8C24850:401..1410	gap2	ATCEA4C128201_1, ATCEA4S32819	95, 87	ATL8C24850:401..623	0.74					
151920	ATU0138 60	ATL8C18309:5242..2884	gap2	ATCEA4C9880_1	95	ATL8C18309:5242..2884	0.74					
151921	ATU0138 61	ATL8C18589:197..1870	gap2	ATCEA4C22540_1	95	ATL8C18589:197..1716	0.74					
151922	ATU0138 62	ATL8C43550:72..624	gap2	ATCEA4C469_1, ATCEA4	95, 95	ATL8C43550:72..556	0.74					

				S4188								
151923	ATU0138 63	ATL8C33032:228..502	gap2	ATCEA4S12420, ATCEA4S35	95, 91	ATL8C33032:467..332	0.74					
151924	ATU0138 64	ATL8C37728:1228..532	gap2	ATCEA4C83566_1	95	ATL8C37728:1228..1075	0.74					
151925	ATU0138 65	ATL8C16958:1373..795	gap2	ATCEA4S33380, ATCEA4S1274	95, 94	ATL8C16958:1336..1113	0.73					
151926	ATU0138 66	ATL8C24983:560..480	gap2	ATCEA4C140946_1	95	ATL8C24983:558..480	0.73					
151927	ATU0138 67	ATL8C33343:280..1	gap2	ATCEA4C46106_1	95	ATL8C33343:244..146	0.73					
151928	ATU0138 68	ATL8C4177:682..104	gap2	ATCEA4C69353_1	95	ATL8C4177:653..104	0.73					
151929	ATU0138 69	ATL8C40086:94..391	gap2	ATCEA4C17100_1, ATCEA4S15823	95, 87	ATL8C40086:166..391	0.73					
151930	ATU0138 70	ATL8C36360:47..1143	gap2	ATCEA4C95089_1	95	ATL8C36360:47..1008	0.73					
151931	ATU0138 71	ATL8C31380:254..2271	gap2	ATCEA4C112852_1, ATCEA4S2360	95, 92	ATL8C31380:255..1904	0.73					
151932	ATU0138 72	ATL8C3287:13..2047	gap2	ATCEA4S35161, ATCEA4	95, 89, 89, 88, 85	ATL8C3287:166..2047	0.73					

				S26332, ATCEA4C9575_1, ATCEA4C29794_8, ATCEA4C29794_4								
151933	ATU013873	ATL8C24388:15..469	gap2	ATCEA4S12213, ATCEA4S14745	95, 86	ATL8C24388:117..469	0.72					
151934	ATU013874	ATL8C45540:374..1206	gap2	ATCEA4S5939	95	ATL8C45540:529..1206	0.72					
151935	ATU013875	ATL8C4253:67..658	gap2	ATCEA4C7231_1	95	ATL8C4253:67..643	0.72					
151936	ATU013876	ATL8C39290:1470..1218	gap2	ATCEA4S2709	95	ATL8C39290:1334..1218	0.72					
151937	ATU013877	ATL8S27614:1..654	gap2	ATCEA4C49175_1, ATCEA4C21962_1	95, 95	ATL8S27614:54..643	0.72					
151938	ATU013878	ATL8S4:203..447	gap2	ATCEA4C123034_1	95	ATL8S4:346..305	0.72					
151939	ATU013879	ATL8C26728:807..1	gap2	ATCEA4C32028_1	95	ATL8C26728:703..145	0.72					
151940	ATU013880	ATL8C3809:900..51	gap2	ATCEA4C17791_1	95	ATL8C3809:530..51	0.72					
151941	ATU013	ATL8C6	gap2	ATCEA4	95	ATL8C6	0.72					

	881	313:1525..356		C2844_1		313:1525..492						
151942	ATU013882	ATL8C15144:85..1070	gap2	ATCEA4C17259_1, ATCEA4S36048	95, 88	ATL8C15144:85..850	0.72					
151943	ATU013883	ATL8C21604:148..1659	gap2	ATCEA4S4853, ATCEA4C16614_1	95, 90	ATL8C21604:226..1659	0.72					
151944	ATU013884	ATL8C37198:4221..163	gap2	ATCEA4S14041, ATCEA4S23173	94, 83	ATL8C37198:4221..163	0.71	g4572672	100	2794		(AC006954) hypothetical protein [Arabidopsis thaliana]
151945	ATU013885	ATL8C21472:1456..893	gap2	ATCEA4C151860_1	95	ATL8C21472:1456..1099	0.71					
151946	ATU013886	ATL8C32958:170..2282	gap2	ATCEA4C57169_1, ATCEA4C12615_1, ATCEA4S30782	95, 93, 90	ATL8C32958:310..2282	0.71					
151947	ATU013887	ATL8C11017:760..12	gap2	ATCEA4C12927_1	95	ATL8C11017:730..12	0.71					
151948	ATU013888	ATL8C45335:1033..582	gap2	ATCEA4C121979_1	95	ATL8C45335:1007..804	0.71					
151949	ATU013889	ATL8C18235:1	gap2	ATCEA4S33563	95, 93	ATL8C18235:2	0.71					

		..719		, ATCEA4 S28047		04..71 1						
151950	ATU013 890	ATL8C4 6011:1 28..17 96	gap2	ATCEA4 S33139 , ATCEA4 S27481	95, 89	ATL8C4 6011:1 28..17 96	0.71					
151951	ATU013 891	ATL8C1 0404:1 ..1894	gap2	ATCEA4 C32753 _1, ATCEA4 C70128 _1	94, 93	ATL8C1 0404:3 36..11 71	0.71	g45389 06	100	997		(AL049 482) choline kinase GmCK2p -like protein [Arabidopsis thaliana]
151952	ATU013 892	ATL8S8 713:57 4..1	gap2	ATCEA4 S13972 , ATCEA4 C3350_ 1, ATCEA4 S12038 , ATCEA4 S185, ATCEA4 S3045	95, 93, 92, 91, 84	ATL8S8 713:68 ..174	0.71					
151953	ATU013 893	ATL8C4 4978:1 ..870	gap2	ATCEA4 S28000 , ATCEA4 S23215 , ATCEA4 S15619	95, 88, 83	ATL8C4 4978:1 81..87 0	0.70					
151954	ATU013 894	ATL8C1 3203:1	gap2	ATCEA4 S15732	95	ATL8C1 3203:1	0.70					

		319..827				319..993						
151955	ATU013895	ATL8C24627:10730..8868	gap2	ATCEA4C25244_3, ATCEA4C82246_1, ATCEA4C25244_1, ATCEA4S31322	95, 95, 92, 89	ATL8C24627:10730..9156	0.70					
151956	ATU013896	ATL8C28567:1006..1	gap2	ATCEA4S35271	95	ATL8C28567:659..101	0.70					
151957	ATU013897	ATL8C37432:3812..2113	gap2	ATCEA4C129522_1, ATCEA4C31836_1	95, 90	ATL8C37432:2837..2113	0.70					
151958	ATU013898	ATL8C6969:786..99	gap2	ATCEA4S456	95	ATL8C6969:786..113	0.70					
151959	ATU013899	ATL8C47152:140..1716	gap2	ATCEA4C143684_1	95	ATL8C47152:140..1545	0.70					
151960	ATU013900	ATL8C41915:245..400	gap2	ATCEA4S6164	95	ATL8C41915:275..396	0.70					
151961	ATU013901	ATL8S29517:134..591	gap2	ATCEA4S5897	95	ATL8S29517:215..392	0.70					
151962	ATU013902	ATL8C41829:1215..947	gap2	ATCEA4C76536_1	95	ATL8C41829:1169..947	0.70					
151963	ATU013903	ATL8C11113:1	gap2	ATCEA4C60696	95	ATL8C11113:8	0.69					

		..673		_1		1..153						
151964	ATU013904	ATL8C45500:171..509	gap2	ATCEA4S35313	95	ATL8C45500:171..488	0.69					
151965	ATU013905	ATL8C18138:200..625	gap2	ATCEA4C102973_1	95	ATL8C18138:482..612	0.69					
151966	ATU013906	ATL8C31884:562..135	gap2	ATCEA4C44094_1	95	ATL8C31884:471..227	0.69					
151967	ATU013907	ATL8C5078:258..1205	gap2	ATCEA4S10580	95	ATL8C5078:258..1148	0.69					
151968	ATU013908	ATL8C44506:1..579	gap2	ATCEA4C119734_1	95	ATL8C44506:109..442	0.68					
151969	ATU013909	ATL8C14673:546..2090	gap2	ATCEA4S7539	95	ATL8C14673:546..2090	0.68					
151970	ATU013910	ATL8C38733:411..1871	gap2	ATCEA4C25529_1, ATCEA4S8816, ATCEA4S7909	95, 95, 91	ATL8C38733:411..1871	0.68					
151971	ATU013911	ATL8C47722:739..1	gap2	ATCEA4C18742_1	95	ATL8C47722:590..422	0.68					
151972	ATU013912	ATL8S8235:257..1	gap2	ATCEA4S29838, ATCEA4C17996_1	95, 94	ATL8S8235:207..154	0.68					
151973	ATU013913	ATL8S5510:1.	gap2	ATCEA4S29616	95	ATL8S5510:84	0.68					

		.400				..400						
151974	ATU0139 14	ATL8C1 953:884..352	gap2	ATCEA4C17792_1	95	ATL8C1 953:884..356	0.68					
151975	ATU0139 15	ATL8C2 6798:80..552	gap2	ATCEA4C26838_1	95	ATL8C2 6798:208..509	0.68					
151976	ATU0139 16	ATL8C2 5851:1065..8	gap2	ATCEA4C8063_1	95	ATL8C2 5851:917..8	0.68					
151977	ATU0139 17	ATL8C1 8195:183..1579	gap2	ATCEA4C23454_1, ATCEA4S31579	95, 90	ATL8C1 8195:714..1474	0.67					
151978	ATU0139 18	ATL8C2 7811:921..1	gap2	ATCEA4C30910_1	95	ATL8C2 7811:289..6	0.67					
151979	ATU0139 19	ATL8C2 3234:958..475	gap2	ATCEA4S3144, ATCEA4S32597	95, 92	ATL8C2 3234:950..507	0.67					
151980	ATU0139 20	ATL8C2 8697:1..218	gap2	ATCEA4C13355_1	95	ATL8C2 8697:104..190	0.67					
151981	ATU0139 21	ATL8C4 9295:1..1230	gap2	ATCEA4C5613_1	95	ATL8C4 9295:499..1230	0.67					
151982	ATU0139 22	ATL8C1 2485:125..543	gap2	ATCEA4C25951_1	95	ATL8C1 2485:142..499	0.67					
151983	ATU0139 23	ATL8C3 267:83..5006	gap2	ATCEA4S179, ATCEA4S11406, ATCEA4S3937	94, 89, 87	ATL8C3 267:83..4753	0.67	g4263541, g3377816, g4773910	100, 72, 35	1269, 2424, 130	3.9e-105, 6.4e-231, 0.0047	(AC006250) putative Athila retroelement ORF1 protei

												n [Arabidopsis thaliana]; (AF076275) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
151984	ATU013924	ATL8C13045:1669..3979	gap2	ATCEA4S2789	94	ATL8C13045:1735..3979	0.67	g3510249	100	1215	1.5e-120	(AC005310) unknown protein [Arabidopsis

												thaliana]
151985	ATU013925	ATL8C19360:732..1	gap2	ATCEA4C47856_1	95	ATL8C19360:187..34	0.67					
151986	ATU013926	ATL8C25277:517..1314	gap2	ATCEA4C76110_1, ATCEA4S26969	95, 88	ATL8C25277:1314..517	0.67					
151987	ATU013927	ATL8S27322:84..601	gap2	ATCEA4C33887_1	95	ATL8S27322:84..414	0.66					
151988	ATU013928	ATL8C49012:1..1486	gap2	ATCEA4S25801, ATCEA4C21550_1	95, 93	ATL8C49012:113..666	0.66					
151989	ATU013929	ATL8S2815:1..247	gap2	ATCEA4C1985_1, ATCEA4S34116	95, 90	ATL8S2815:19..247	0.66					
151990	ATU013930	ATL8C8171:7138..673	gap2	ATCEA4S344, ATCEA4S178, ATCEA4S253	94, 92, 86	ATL8C8171:7138..720	0.66	g4038066, g4263541, g4773908, g4773920, g4567295	100, 100, 100, 100, 35	716, 829, 3143, 3145, 586	3.8e-26, 3.5e-86, 1.7e-303, 1.0e-305, 1.4e-76	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AC006250) putative Athila retroelement ORF1 protein

												[Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]; (AF147259) F10A2.17 gene product [Arabidopsis thaliana]; (AC006918) putative pol polyprotein [Arabidopsis thaliana]
151991	ATU013931	ATL8C8384:678..1063	gap2	ATCEA4C26721_1	95	ATL8C8384:878..1025	0.66					
151992	ATU013932	ATL8C4108:1..3115	gap2	ATCEA4S1583	95	ATL8C4108:51..3115	0.66					
151993	ATU013933	ATL8C28764:1	gap2	ATCEA4C14327	95	ATL8C28764:2	0.66					

		..647		_1		75..509						
151994	ATU013934	ATL8C41227:156..870	gap2	ATCEA4C29268_2, ATCEA4C29268_1, ATCEA4S22560	95, 88, 83	ATL8C41227:161..866	0.66					
151995	ATU013935	ATL8C38797:132..637	gap2	ATCEA4C27733_1, ATCEA4S10380, ATCEA4S10815	95, 88, 88	ATL8C38797:248..637	0.66					
151996	ATU013936	ATL8C28379:438..1320	gap2	ATCEA4C41452_1	95	ATL8C28379:439..1067	0.66					
151997	ATU013937	ATL8C23261:1..1354	gap2	ATCEA4C6033_1	95	ATL8C23261:38..1354	0.66					
151998	ATU013938	ATL8S6526:570..1	gap2	ATCEA4C311_1	95	ATL8S6526:229..92	0.65					
151999	ATU013939	ATL8C35803:1544..420	gap2	ATCEA4C68242_1, ATCEA4S12590	95, 93	ATL8C35803:1544..420	0.65					
152000	ATU013940	ATL8C13651:93..1025	gap2	ATCEA4C82814_1, ATCEA4C17934_1	95, 90	ATL8C13651:384..795	0.65					
152001	ATU013941	ATL8C14790:1088..14	gap2	ATCEA4S26219, ATCEA4	95, 85	ATL8C14790:1088..14	0.65					

				C40309 1								
152002	ATU013 942	ATL8C3 6973:3 1..976	gap2	ATCEA4 S17027	95	ATL8C3 6973:3 1..976	0.65					
152003	ATU013 943	ATL8C6 480:92 8..143 8	gap2	ATCEA4 S27156	95	ATL8C6 480:14 38..92 8	0.65					
152004	ATU013 944	ATL8C4 354:21 20..29 79	gap2	ATCEA4 C13658 5_1	95	ATL8C4 354:29 79..21 20	0.65					
152005	ATU013 945	ATL8C4 5712:1 341..1	gap2	ATCEA4 S35855 , ATCEA4 C18046 1	95, 88	ATL8C4 5712:1 008..1 54	0.64					
152006	ATU013 946	ATL8C2 2691:1 ..559	gap2	ATCEA4 C710_1	95	ATL8C2 2691:1 57..52 4	0.64					
152007	ATU013 947	ATL8C4 7910:4 97..1	gap2	ATCEA4 S35592	95	ATL8C4 7910:1 88..47	0.64					
152008	ATU013 948	ATL8C4 6149:3 200..1 1062	gap2	ATCEA4 S126, ATCEA4 S11628	94, 86	ATL8C4 6149:3 200..1 1062	0.64	g40380 48, g45860 66, g33778 16	100, 100, 69	529, 3365, 238	6.0e-35, 0.0, 2.1e-63	(AC005 897) hypoth etical protei n [Arabi dopsis thalia na]; (AC006 194) putati ve pol polypr otein, 3' partia

												1 [Arabidopsis thaliana]; (AF076275) contains similarity to Arabidopsis thaliana retrotranspo son Athila (GB:X81801) [Arabidopsis thaliana]
152009	ATU013949	ATL8C25680:358..2110	gap2	ATCEA4C60256_1	94	ATL8C25680:379..2110	0.64	g1653791	100	308	2.1e-19	(D90916) hypothetical protein [Synechocystis sp.]
152010	ATU013950	ATL8C33790:552..796	gap2	ATCEA4C161946_1	95	ATL8C33790:570..796	0.64					
152011	ATU013951	ATL8C38589:136..477	gap2	ATCEA4S30064	95	ATL8C38589:136..477	0.64					
152012	ATU013	ATL8C4	gap2	ATCEA4	95	ATL8C4	0.63					

	952	4638:1..580		S11516		4638:55..580						
152013	ATU013953	ATL8C27313:1971..115	gap2	ATCEA4C12483_1, ATCEA4C95245_1, ATCEA4C120722_1, ATCEA4S26240	95, 92, 89, 85	ATL8C27313:1872..823	0.63					
152014	ATU013954	ATL8C27227:1..645	gap2	ATCEA4C53638_1	95	ATL8C27227:53..645	0.63					
152015	ATU013955	ATL8C49928:2113..711	gap2	ATCEA4C23019_1, ATCEA4S32083, ATCEA4S28336	94, 86, 84	ATL8C49928:2112..850	0.63	g3152569	100	568	9.1e-40	(AC002986) Contains similarity to YELA protein gb|U63062 from Dictyostelium discoideum. [Arabidopsis thaliana]
152016	ATU013956	ATL8C6304:1..849	gap2	ATCEA4S23862, ATCEA4S2366, ATCEA4C22539	95, 85, 85	ATL8C6304:378..699	0.62					

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152017	ATU013957	ATL8C48729:563..2310	gap2	ATCEA4C22168_1	95	ATL8C48729:563..2310	0.62					
152018	ATU013958	ATL8C26544:82..1758	gap2	ATCEA4C80026_1, ATCEA4S32876	95, 84	ATL8C26544:82..1648	0.62					
152019	ATU013959	ATL8C25480:476..927	gap2	ATCEA4S566	95	ATL8C25480:476..907	0.62					
152020	ATU013960	ATL8S9750:1..359	gap2	ATCEA4C485_1	95	ATL8S9750:97..226	0.62					
152021	ATU013961	ATL8C22230:367..770	gap2	ATCEA4C18260_1	95	ATL8C22230:367..499	0.62					
152022	ATU013962	ATL8C17794:678..1467	gap2	ATCEA4C976_1, ATCEA4S36300	95, 93	ATL8C17794:706..1467	0.62					
152023	ATU013963	ATL8S18972:1..484	gap2	ATCEA4C1769_1	95	ATL8S18972:169..433	0.62					
152024	ATU013964	ATL8C35234:1..323	gap2	ATCEA4S2552	95	ATL8C35234:45..323	0.61					
152025	ATU013965	ATL8C223:4181..1678	gap2	ATCEA4C11978_1	94	ATL8C223:3856..1678	0.61	g2213534	100	541	2.1e-29	(X98739) DNA-binding PD1-like protein [Pisum sativum]

152026	ATU013966	ATL8C38622:1506..673	gap2	ATCEA4S10956	95	ATL8C38622:1491..673	0.61					
152027	ATU013967	ATL8C32128:960..192	gap2	ATCEA4C77046_1, ATCEA4S32795, ATCEA4C242442	95, 94, 93	ATL8C32128:796..605	0.61					
152028	ATU013968	ATL8C25103:1950..134	gap2	ATCEA4C127837_1	95	ATL8C25103:1950..134	0.61					
152029	ATU013969	ATL8C3146:7678..18042	gap2	ATCEA4C2398_1, ATCEA4S3937, ATCEA4S179, ATCEA4C2398_2	94, 89, 88, 82	ATL8C3146:7904..10863, ATL8C3146:11159..14641, ATL8C3146:17347..18025	0.61, 0.70, 0.89	g4773919, g4432807, g4886286, g4773910	100, 81, 56, 43	2324, 2891, 315, 295	4.7e-167, 8.6e-294, 5.7e-24, 5.9e-27	(AF147259) No definition line found [Arabidopsis thaliana]; (AC006570) putative polyprotein [Arabidopsis thaliana]; (AL050300) putative protein [Arabi

												dopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
152030	ATU013970	ATL8S8612:1..653	gap2	ATCEA4C119166_1, ATCEA4S30288	95, 86	ATL8S8612:450..284	0.61					
152031	ATU013971	ATL8C44192:515..3714	gap2	ATCEA4C17098_1, ATCEA4C17098_2	94, 92	ATL8C44192:515..3714	0.60	g4262175, g4580399	100, 39	523, 97	6.0e-41, 1.9e-08	(AC005508) 12894 [Arabidopsis thaliana]; (AC007171) hypothetical protein [Arabidopsis thaliana]
152032	ATU013972	ATL8C12733:10..1082	gap2	ATCEA4S16328, ATCEA4S16048	95, 91	ATL8C12733:10..875	0.60					
152033	ATU013973	ATL8C44763:270..1341	gap2	ATCEA4S34641	95	ATL8C44763:270..841	0.60					

152034	ATU0139974	ATL8C37210:1..459	gap2	ATCEA4C67133_1, ATCEA4S19627, ATCEA4C67133_2	95, 88, 87	ATL8C37210:81..308	0.60					
152035	ATU0139975	ATL8C21550:178..539	gap2	ATCEA4S3258	95	ATL8C21550:228..517	0.60					
152036	ATU0139976	ATL8S20074:472..1	gap2	ATCEA4C1769_1	95	ATL8S20074:301..44	0.60					
152037	ATU0139977	ATL8C35121:297..930	gap2	ATCEA4S2195	95	ATL8C35121:297..930	0.60					
152038	ATU0139978	ATL8C37294:762..1511	gap2	ATCEA4S23810, ATCEA4S26373	95, 84	ATL8C37294:762..216	0.60					
152039	ATU0139979	ATL8C20580:129..597	gap2	ATCEA4C17288_1	95	ATL8C20580:220..572	0.59					
152040	ATU0139980	ATL8C47743:348..990	gap2	ATCEA4C117027_1, ATCEA4S34148	95, 87	ATL8C47743:381..764	0.59					
152041	ATU0139981	ATL8C31059:1253..1	gap2	ATCEA4S5223, ATCEA4C763_1	95, 90	ATL8C31059:1253..399	0.59					
152042	ATU0139982	ATL8C36598:73..2017	gap2	ATCEA4S12516	95	ATL8C36598:73..1774	0.59					
152043	ATU0139983	ATL8C10740:6	gap2	ATCEA4C13164	95, 92, 86	ATL8C10740:1	0.59					

		31..1677		4_1, ATCEA4S6274, ATCEA4S35752		053..1555						
152044	ATU013984	ATL8C3684:12025..3334	gap2	ATCEA4S344, ATCEA4S178	94, 94	ATL8C3684:12025..6955	0.59	g3695399, g4038066	100, 100	3263, 653	2.7e-289, 2.1e-29	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabidopsis thaliana]
152045	ATU013985	ATL8C26813:1831..865	gap2	ATCEA4C10867_1	95	ATL8C26813:1725..869	0.59					
152046	ATU013986	ATL8C29767:864..350	gap2	ATCEA4S72	95	ATL8C29767:428..350	0.58					
152047	ATU013	ATL8C3	gap2	ATCEA4	95	ATL8C3	0.58					

	987	7836:2623..760		S6443		7836:2623..760						
152048	ATU013988	ATL8C27466:536..2204	gap2	ATCEA4C8261_1, ATCEA4S31510	95, 90	ATL8C27466:617..1856	0.58					
152049	ATU013989	ATL8C15873:812..2543	gap2	ATCEA4S31827	94	ATL8C15873:812..2534	0.58	g4585871	100	1732	2.9e-176	(AC005850) Unknown protein [Arabidopsis thaliana]
152050	ATU013990	ATL8C19900:63..897	gap2	ATCEA4S672	95	ATL8C19900:86..897	0.58					
152051	ATU013991	ATL8C13940:1..6379	gap2	ATCEA4S344, ATCEA4S178, ATCEA4S253	94, 94, 88	ATL8C13940:75..5836	0.58	g4773908, g4038066, g4262210	100, 100, 49	3339, 814, 811	0.0, 3.5e-29, 9.6e-81	(AF147259) No definition line found [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabidopsis thaliana]; (AC006161) simila

												r to leucine zipper transcription factor [Arabidopsis thaliana]
152052	ATU0139 92	ATL8C7 324:1. .984	gap2	ATCEA4 S18674 , ATCEA4 C1946_ 1	95, 94	ATL8C7 324:83 ..783	0.58					
152053	ATU0139 93	ATL8C4 7545:3 20..10 44	gap2	ATCEA4 S3105	95	ATL8C4 7545:6 99..77 0	0.57					
152054	ATU0139 94	ATL8C4 0866:4 6..913	gap2	ATCEA4 C41670 _1, ATCEA4 S30047	95, 92	ATL8C4 0866:1 10..68 7	0.57					
152055	ATU0139 95	ATL8C2 7137:1 ..362	gap2	ATCEA4 C10161 1_1	95	ATL8C2 7137:2 19..36 2	0.57					
152056	ATU0139 96	ATL8C2 8384:5 6..110 4	gap2	ATCEA4 S30086 , ATCEA4 C48861 _1	95, 90	ATL8C2 8384:5 6..110 4	0.57					
152057	ATU0139 97	ATL8C3 1159:2 92..75 6	gap2	ATCEA4 C78685 _1	95	ATL8C3 1159:5 48..43 0	0.57					
152058	ATU0139 98	ATL8C1 0635:1 03..41	gap2	ATCEA4 S30125 ,	95, 93	ATL8C1 0635:1 03..21	0.56					

		0		ATCEA4S16103		9						
152059	ATU013999	ATL8C16088:93..635	gap2	ATCEA4C115937_1, ATCEA4S26808	95, 90	ATL8C16088:502..635	0.56					
152060	ATU014000	ATL8C49820:1704..2957	gap2	ATCEA4S32209	95	ATL8C49820:1704..2615	0.56					
152061	ATU014001	ATL8S25670:1..432	gap2	ATCEA4S30369, ATCEA4C6281_3, ATCEA4S5231, ATCEA4C44537_1, ATCEA4S26775	95, 88, 85, 82, 82	ATL8S25670:192..48	0.56					
152062	ATU014002	ATL8C41704:731..170	gap2	ATCEA4S3274	95	ATL8C41704:731..170	0.56					
152063	ATU014003	ATL8S6197:1..523	gap2	ATCEA4C12291_1	95	ATL8S6197:110..493	0.56					
152064	ATU014004	ATL8C38199:86..452	gap2	ATCEA4S35198	95	ATL8C38199:86..142	0.55					
152065	ATU014005	ATL8C41408:2609..4223	gap2	ATCEA4S26803, ATCEA4S26804	95, 90	ATL8C41408:2852..4223	0.55					
152066	ATU014006	ATL8C31422:931..89	gap2	ATCEA4C116921_1	95	ATL8C31422:931..274	0.55					
152067	ATU014	ATL8C2	gap2	ATCEA4	95	ATL8C2	0.54					

	007	785:1..325		S4411		785:163..236						
152068	ATU014008	ATL8C31490:1277..215	gap2	ATCEA4S11408	95	ATL8C31490:1115..215	0.54					
152069	ATU014009	ATL8C32290:53..419	gap2	ATCEA4S35467	95	ATL8C32290:53..419	0.54					
152070	ATU014010	ATL8C33363:3280..78	gap2	ATCEA4S2346, ATCEA4S31277, ATCEA4S6625	95, 88, 82	ATL8C33363:3280..78	0.54					
152071	ATU014011	ATL8C26435:1..1245	gap2	ATCEA4C116960_1	95	ATL8C26435:46..1245	0.54					
152072	ATU014012	ATL8C32144:228..999	gap2	ATCEA4S13062	95	ATL8C32144:228..652	0.54					
152073	ATU014013	ATL8S16855:473..147	gap2	ATCEA4S8314	95	ATL8S16855:473..343	0.54					
152074	ATU014014	ATL8C35191:321..778	gap2	ATCEA4C1130_4, ATCEA4S33597, ATCEA4S30815	95, 88, 86	ATL8C35191:734..373	0.53					
152075	ATU014015	ATL8C37876:613..96	gap2	ATCEA4C56845_1	95	ATL8C37876:543..96	0.53					
152076	ATU014016	ATL8C25386:1..495	gap2	ATCEA4C73508_1	95	ATL8C25386:84..369	0.53					
152077	ATU014017	ATL8S8569:30	gap2	ATCEA4S2860	95	ATL8S8569:24	0.53					

		2..49				6..113						
152078	ATU014018	ATL8C8473:1153..450	gap2	ATCEA4S25953	95	ATL8C8473:1135..450	0.53					
152079	ATU014019	ATL8S1908:467..1	gap2	ATCEA4S36368, ATCEA4C1850_1	95, 95	ATL8S1908:399..303	0.52					
152080	ATU014020	ATL8C47777:82..531	gap2	ATCEA4C53849_1	95	ATL8C47777:82..513	0.52					
152081	ATU014021	ATL8S24607:7..345	gap2	ATCEA4S587	95	ATL8S24607:125..332	0.51					
152082	ATU014022	ATL8C30159:1392..324	gap2	ATCEA4C577_1	95	ATL8C30159:1337..560	0.51					
152083	ATU014023	ATL8C5198:658..228	gap2	ATCEA4S13780	95	ATL8C5198:658..386	0.51					
152084	ATU014024	ATL8C49957:3192..3565	gap2	ATCEA4S1325	95	ATL8C49957:3321..3565	0.51					
152085	ATU014025	ATL8C32006:563..1881	gap2	ATCEA4C13590_1	95	ATL8C32006:563..1881	0.51					
152086	ATU014026	ATL8C48323:1630..1	gap2	ATCEA4C19632_1, ATCEA4S4603	95, 82	ATL8C48323:1590..81	0.51					
152087	ATU014027	ATL8C11880:324..1580	gap2	ATCEA4C48483_1	95	ATL8C11880:324..1562	0.50					
152088	ATU014028	ATL8C37801:7	gap2	ATCEA4S10715	95	ATL8C37801:7	0.50					

		..1630				..1630						
152089	ATU0140 29	ATL8C35966:887..230	gap2	ATCEA4C32974_1	95	ATL8C35966:771..394	0.50					
152090	ATU0140 30	ATL8C40988:488..1015	gap2	ATCEA4S2644	95	ATL8C40988:593..1015	0.49					
152091	ATU0140 31	ATL8C8354:477..1	gap2	ATCEA4C17868_1	95	ATL8C8354:477..330	0.49					
152092	ATU0140 32	ATL8C43783:1509..464	gap2	ATCEA4S27213, ATCEA4C10131_2	95, 91	ATL8C43783:1391..656	0.49					
152093	ATU0140 33	ATL8C33384:498..1023	gap2	ATCEA4S6259	95	ATL8C33384:498..920	0.49					
152094	ATU0140 34	ATL8S22850:468..1	gap2	ATCEA4S7610	95	ATL8S22850:468..356	0.49					
152095	ATU0140 35	ATL8C25729:193..682	gap2	ATCEA4C4872_1	95	ATL8C25729:193..682	0.49					
152096	ATU0140 36	ATL8C5315:1332..672	gap2	ATCEA4C59274_1, ATCEA4S31660	95, 86	ATL8C5315:1267..910	0.48					
152097	ATU0140 37	ATL8C19422:7..2016	gap2	ATCEA4C22756_1	95	ATL8C19422:7..1951	0.48					
152098	ATU0140 38	ATL8S27024:199..1	gap2	ATCEA4S31397	95	ATL8S27024:150..17	0.48					
152099	ATU0140 39	ATL8C48807:413..15	gap2	ATCEA4S5391	95	ATL8C48807:413..15	0.48					

		84				84						
152100	ATU014040	ATL8C3322:870..2768	gap2	ATCEA4C115580_1	95	ATL8C3322:870..2608	0.48					
152101	ATU014041	ATL8C36181:856..1269	gap2	ATCEA4C115560_1	95	ATL8C36181:1183..1055	0.48					
152102	ATU014042	ATL8C11771:1183..3975	gap2	ATCEA4S1297	94	ATL8C11771:1183..3442	0.48	g2832629	100	890	1.3e-92	(AL021711) 4-coumarate-CoA ligase-like [Arabidopsis thaliana]
152103	ATU014043	ATL8C8568:621..222	gap2	ATCEA4C8006_1, ATCEA4C8006_2	95, 93	ATL8C8568:458..225	0.48					
152104	ATU014044	ATL8C24493:1273..1	gap2	ATCEA4C21582_1	95	ATL8C24493:1273..172	0.47					
152105	ATU014045	ATL8C46375:578..917	gap2	ATCEA4C24855_1	95	ATL8C46375:742..907	0.47					
152106	ATU014046	ATL8C31353:88..864	gap2	ATCEA4C31287_1	95	ATL8C31353:152..864	0.47					
152107	ATU014047	ATL8C11068:164..1553	gap2	ATCEA4C58600_1, ATCEA4C11979	95, 93	ATL8C11068:172..1553	0.47					

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152108	ATU014048	ATL8S22649:217..551	gap2	ATCEA4S2194	95	ATL8S22649:217..441	0.47					
152109	ATU014049	ATL8S20685:707..109	gap2	ATCEA4S1169	95	ATL8S20685:598..109	0.47					
152110	ATU014050	ATL8C20212:22..660	gap2	ATCEA4S12671	95	ATL8C20212:22..508	0.46					
152111	ATU014051	ATL8C27598:1..372	gap2	ATCEA4C64891_1	95	ATL8C27598:145..255	0.46					
152112	ATU014052	ATL8C49417:2291..2022	gap2	ATCEA4S35330	95	ATL8C49417:2233..2137	0.46					
152113	ATU014053	ATL8C50070:913..7206	gap2	ATCEA4S178, ATCEA4S253	94, 88	ATL8C50070:1003..7206	0.46	g4038066, g4388825	100, 77	792, 798	2.5e-39, 1.5e-81	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AC006528) putative pol polyprotein with reverse transcriptase domain (Pfam:

												PF00078) [Arabidopsis thaliana]
152114	ATU014054	ATL8C6820:670..1422	gap2	ATCEA4S2291, ATCEA4C21759_2	95, 91	ATL8C6820:730..1422	0.46					
152115	ATU014055	ATL8C50084:1186..35	gap2	ATCEA4S10911	95	ATL8C50084:975..35	0.46					
152116	ATU014056	ATL8S5382:562..80	gap2	ATCEA4C397_1	95	ATL8S5382:382..80	0.46					
152117	ATU014057	ATL8C41763:11374..20	gap2	ATCEA4S344, ATCEA4S27399, ATCEA4S178, ATCEA4S253	94, 92, 90, 83	ATL8C41763:10989..20	0.46	g4773908, g4038066, g3047066, g4325351	100, 100, 100, 57	4139, 593, 2829, 1099	0.0, 5.4e-33, 7.0e-273, 8.0e-129	(AF147259) No definition line found [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabidopsis thaliana]; (AF058825) contains similarity

												to retrovirus-related POL polyproteins [Arabidopsis thaliana]; (AF128394) similar to Antirrhinum majus (garden snapdragon) TNP2 protein (GB:X57297) [Arabidopsis thaliana]
152118	ATU014058	ATL8C13418:712..1824	gap2	ATCEA4C21433_1	95	ATL8C13418:712..1787	0.46					
152119	ATU014059	ATL8C18280:433..584	gap2	ATCEA4C19576_1	95	ATL8C18280:467..518	0.45					
152120	ATU014060	ATL8S28172:154..455	gap2	ATCEA4S30326	95	ATL8S28172:283..455	0.45					
152121	ATU014061	ATL8C936:845	gap2	ATCEA4S27145	95, 95	ATL8C936:782	0.45					

		..140		, ATCEA4 S6515		..591						
152122	ATU014 062	ATL8C3 4487:1 ..1247	gap2	ATCEA4 S29364 , ATCEA4 C15514 2_1	95, 89	ATL8C3 4487:1 29..11 47	0.45					
152123	ATU014 063	ATL8C2 3514:6 65..80	gap2	ATCEA4 C48165 _1, ATCEA4 S16576	95, 89	ATL8C2 3514:2 17..12 8	0.44					
152124	ATU014 064	ATL8S1 8508:6 0..330	gap2	ATCEA4 C16121 _1	95	ATL8S1 8508:8 2..307	0.44					
152125	ATU014 065	ATL8C4 6309:1 376..1 918	gap2	ATCEA4 C7744_ 1, ATCEA4 S2838	95, 94	ATL8C4 6309:1 771..1 896	0.44					
152126	ATU014 066	ATL8C5 188:1. .908	gap2	ATCEA4 C19949 _1	95	ATL8C5 188:41 2..908	0.44					
152127	ATU014 067	ATL8C4 7867:5 22..89 37	gap2	ATCEA4 S27391 , ATCEA4 S11082	94, 85	ATL8C4 7867:8 55..49 28, ATL8C4 7867:5 301..8 306	0.44, 0.79	g47739 18, g47739 10	100, 66	2114, 430	8.2e-149, 2.1e-18	(AF147 259) No definition line found [Arabidopsis thaliana]; (AF147 259) No definition line found [Arabi

												dopsis thaliana]
152128	ATU014068	ATL8C4298:367..734	gap2	ATCEA4C17942_1	95	ATL8C4298:625..516	0.44					
152129	ATU014069	ATL8C26413:1567..241	gap2	ATCEA4C11675_1, ATCEA4S29957, ATCEA4S36170, ATCEA4S22796	95, 93, 91, 84	ATL8C26413:241..1567	0.44					
152130	ATU014070	ATL8C21007:645..1	gap2	ATCEA4S28162	95	ATL8C21007:473..52	0.44					
152131	ATU014071	ATL8C15586:601..59	gap2	ATCEA4S1879	95	ATL8C15586:550..59	0.43					
152132	ATU014072	ATL8C519:2584..1311	gap2	ATCEA4C135837_1	95	ATL8C519:2584..1471	0.43					
152133	ATU014073	ATL8C8443:763..50	gap2	ATCEA4C56829_1	95	ATL8C8443:742..50	0.43					
152134	ATU014074	ATL8C1034:991..3778	gap2	ATCEA4S34639, ATCEA4C121944_1	95, 93	ATL8C1034:991..3778	0.43					
152135	ATU014075	ATL8S13341:1..329	gap2	ATCEA4S1195	95	ATL8S13341:1..282	0.43					
152136	ATU014076	ATL8S4748:554..267	gap2	ATCEA4S32323	95	ATL8S4748:513..267	0.43					
152137	ATU014077	ATL8C44523:5	gap2	ATCEA4C64837	95	ATL8C44523:5	0.43					

		66..3083		_1		66..3083						
152138	ATU014078	ATL8C20232:4790..1562	gap2	ATCEA4C2106_1	94	ATL8C20232:4760..1562	0.42	g4539333	100	1599	6.9e-138	(AL035539) putative amino acid transport protein [Arabidopsis thaliana]
152139	ATU014079	ATL8C30944:407..754	gap2	ATCEA4C38741_1	95	ATL8C30944:503..671	0.42					
152140	ATU014080	ATL8C49345:1462..493	gap2	ATCEA4C22201_3, ATCEA4S27278, ATCEA4C22201_5, ATCEA4C22201_2, ATCEA4S24874	95, 94, 92, 90, 82	ATL8C49345:493..1281	0.42					
152141	ATU014081	ATL8C15457:1..1336	gap2	ATCEA4S35968, ATCEA4C35423_1	95, 93	ATL8C15457:1157..921	0.42					
152142	ATU014082	ATL8C7464:1145..298	gap2	ATCEA4C5148_1, ATCEA4	95, 89	ATL8C7464:1078..298	0.42					

				S9913								
152143	ATU014083	ATL8C28579:570..1	gap2	ATCEA4C6316_1, ATCEA4C6316_2, ATCEA4S31785	95, 92, 82	ATL8C28579:500..170	0.41					
152144	ATU014084	ATL8C17293:27..1211	gap2	ATCEA4C115728_1, ATCEA4C115728_2	94, 89	ATL8C17293:177..1069	0.41	g4678221	100	496	1.6e-39	(AC007135) hypothetical protein [Arabidopsis thaliana]
152145	ATU014085	ATL8C43021:3673..2066	gap2	ATCEA4C8866_1, ATCEA4S35085, ATCEA4S31299	95, 93, 93	ATL8C43021:3515..2386	0.41					
152146	ATU014086	ATL8C49861:397..6899	gap2	ATCEA4S178	94	ATL8C49861:397..6870	0.41	g4773920, g4038066, g4567298	100, 100, 67	3140, 770, 1650	1.0e-306, 7.3e-36, 1.6e-166	(AF147259) F10A2.17 gene product [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabi

												dopsis thaliana]; (AC006918) putative MuDR MURA transposase [Arabidopsis thaliana]
152147	ATU014087	ATL8C15794:1..889	gap2	ATCEA4S34539	95	ATL8C15794:351..889	0.40					
152148	ATU014088	ATL8C17523:622..1441	gap2	ATCEA4S5610	95	ATL8C17523:622..1441	0.40					
152149	ATU014089	ATL8C14778:3405..3713	gap2	ATCEA4S30489, ATCEA4C3998_1	95, 92							
152150	ATU014090	ATL8C17358:2980..3131	gap2	ATCEA4S10823	95							
152151	ATU014091	ATL8S13948:352..495	gap2	ATCEA4C23613_1	95							
152152	ATU014092	ATL8C6510:2760..2551	gap2	ATCEA4S1023	95							
152153	ATU014093	ATL8C44076:900..97	gap2	ATCEA4S5206	95							

		8										
152154	ATU014094	ATL8C43182:533..162	gap2	ATCEA4S26943, ATCEA4S10397	95, 88							
152155	ATU014095	ATL8C47100:96..233	gap2	ATCEA4C1808_1, ATCEA4S35362, ATCEA4C1808_2	95, 90, 82							
152156	ATU014096	ATL8C44157:1..140	gap2	ATCEA4S12588	95							
152157	ATU014097	ATL8C50051:1..92	gap2	ATCEA4C76824_1	95							
152158	ATU014098	ATL8C17256:1..261	gap2	ATCEA4S13089	95							
152159	ATU014099	ATL8C36461:1265..106	gap2	ATCEA4C21820_1	95							
152160	ATU014100	ATL8C17254:1766..1382	gap2	ATCEA4S24028	95							
152161	ATU014101	ATL8C4863:1227..1758	gap2	ATCEA4C35678_1	95							
152162	ATU014102	ATL8C3762:1116..660	gap2	ATCEA4C138198_1, ATCEA4S25505	95, 82							
152163	ATU014103	ATL8C17199:946..10	gap2	ATCEA4S29875	95							

		61										
152164	ATU014104	ATL8C45408:1..608	gap2	ATCEA4C9297_1	95							
152165	ATU014105	ATL8C3519:1..515	gap2	ATCEA4C143971_1	95							
152166	ATU014106	ATL8C13800:1..106	gap2	ATCEA4S31581	95							
152167	ATU014107	ATL8C26403:743..544	gap2	ATCEA4C19047_1	95							
152168	ATU014108	ATL8C39602:1166..956	gap2	ATCEA4S26125	95							
152169	ATU014109	ATL8S125:1..321	gap2	ATCEA4S962	95							
152170	ATU014110	ATL8C10840:655..1080	gap2	ATCEA4S15693, ATCEA4S26269	95, 83							
152171	ATU014111	ATL8C34908:28..501	gap2	ATCEA4C117736_1	95							
152172	ATU014112	ATL8C17136:1195..572	gap2	ATCEA4C12936_1	95							
152173	ATU014113	ATL8C36284:4702..5405	gap2	ATCEA4C6355_1	95							
152174	ATU014114	ATL8C1710:86..259	gap2	ATCEA4S11556	95							
152175	ATU014115	ATL8C36279:126..1	gap2	ATCEA4S13840	95							
152176	ATU014	ATL8C2	gap2	ATCEA4	95,							

	116	2232:312..106		S27364, ATCEA4S250, ATCEA4C3723_2	85, 82							
152177	ATU014117	ATL8C48497:932..1236	gap2	ATCEA4S8348	95							
152178	ATU014118	ATL8C44250:283..167	gap2	ATCEA4S3306	95							
152179	ATU014119	ATL8S11939:187..97	gap2	ATCEA4S28947, ATCEA4S35993	95, 92							
152180	ATU014120	ATL8C48455:120..1	gap2	ATCEA4S33582	95							
152181	ATU014121	ATL8C18661:744..500	gap2	ATCEA4C6801_1	95							
152182	ATU014122	ATL8C7092:1..373	gap2	ATCEA4S33683	95							
152183	ATU014123	ATL8S12607:600..322	gap2	ATCEA4S11789	95							
152184	ATU014124	ATL8C1382:1691..2126	gap2	ATCEA4S31578	95							
152185	ATU014125	ATL8C32952:282..457	gap2	ATCEA4C19566_1	95							
152186	ATU014126	ATL8C44330:4	gap2	ATCEA4C366_1	95							

		89..86										
152187	ATU014127	ATL8C26450:261..582	gap2	ATCEA4C84993_1	95							
152188	ATU014128	ATL8C13253:344..765	gap2	ATCEA4S14415	95							
152189	ATU014129	ATL8C37810:2585..2252	gap2	ATCEA4S27367	95							
152190	ATU014130	ATL8C12382:943..855	gap2	ATCEA4S26642	95							
152191	ATU014131	ATL8C24617:195..640	gap2	ATCEA4C120144_1	95							
152192	ATU014132	ATL8C21893:1..241	gap2	ATCEA4C109314_1	95							
152193	ATU014133	ATL8S12846:91..305	gap2	ATCEA4S13082	95							
152194	ATU014134	ATL8C31644:3349..3258	gap2	ATCEA4C61199_2	95							
152195	ATU014135	ATL8C22436:235..71	gap2	ATCEA4S6776	95							
152196	ATU014136	ATL8C12351:3813..3283	gap2	ATCEA4C122792_1	95							
152197	ATU014137	ATL8C2244:305..478	gap2	ATCEA4S30049	95							
152198	ATU014138	ATL8C21892:1133..1	gap2	ATCEA4C14926_1	95							

		210										
152199	ATU0141 39	ATL8C32981:237..1	gap2	ATCEA4C7748_1	95							
152200	ATU0141 40	ATL8C17400:2346..2798	gap2	ATCEA4S24015, ATCEA4C548_3	95, 87							
152201	ATU0141 41	ATL8C42705:448..1320	gap2	ATCEA4C574_1	95							
152202	ATU0141 42	ATL8C36202:584..45	gap2	ATCEA4S34428, ATCEA4S34452	95, 90							
152203	ATU0141 43	ATL8S24246:81..324	gap2	ATCEA4C30422_1	95							
152204	ATU0141 44	ATL8C34846:1259..444	gap2	ATCEA4C19027_1	95							
152205	ATU0141 45	ATL8S13062:374..1	gap2	ATCEA4C73632_1	95							
152206	ATU0141 46	ATL8C31484:963..145	gap2	ATCEA4S4620	95							
152207	ATU0141 47	ATL8C23714:2728..2934	gap2	ATCEA4S29351	95							
152208	ATU0141 48	ATL8C2185:1170..1087	gap2	ATCEA4S10901	95							
152209	ATU0141 49	ATL8C44556:1207..1378	gap2	ATCEA4S27198	95							

152210	ATU0141150	ATL8C4830:336..1279	gap2	ATCEA4C57961_4, ATCEA4C57961_1, ATCEA4S35832, ATCEA4S31215, ATCEA4S10248	95, 93, 93, 91, 85							
152211	ATU0141151	ATL8C31496:1..871	gap2	ATCEA4S14790, ATCEA4S4549	95, 88							
152212	ATU0141152	ATL8C3481:1..110	gap2	ATCEA4S11557	95							
152213	ATU0141153	ATL8C39845:511..423	gap2	ATCEA4C29510_1	95							
152214	ATU0141154	ATL8C24939:1262..1	gap2	ATCEA4C27877_1	95							
152215	ATU0141155	ATL8S26569:359..555	gap2	ATCEA4C116365_1	95							
152216	ATU0141156	ATL8S29120:1..206	gap2	ATCEA4C5416_2, ATCEA4C5416_1	95, 95							
152217	ATU0141157	ATL8C31425:1198..361	gap2	ATCEA4S3273	95							
152218	ATU014	ATL8S3	gap2	ATCEA4	95							

	158	0390:284..1		C41148_1								
152219	ATU014159	ATL8C34807:2086..2379	gap2	ATCEA4S27078	95							
152220	ATU014160	ATL8C9578:575..993	gap2	ATCEA4C17419_1, ATCEA4S14665	95, 88							
152221	ATU014161	ATL8C44604:262..588	gap2	ATCEA4S32959, ATCEA4C128225_1	95, 94							
152222	ATU014162	ATL8C48436:556..1	gap2	ATCEA4S29804	95							
152223	ATU014163	ATL8C38478:821..997	gap2	ATCEA4S8315	95							
152224	ATU014164	ATL8C21154:1900..1523	gap2	ATCEA4S321	95							
152225	ATU014165	ATL8C33134:1899..1408	gap2	ATCEA4S24929, ATCEA4S24885, ATCEA4S24902, ATCEA4S20897	95, 91, 88, 86							
152226	ATU014166	ATL8C26546:1035..1	gap2	ATCEA4C28247_1	95							
152227	ATU014167	ATL8C38840:1	gap2	ATCEA4S32823	95							

		..291										
152228	ATU0141 68	ATL8S3475:139..1	gap2	ATCEA4C6655_2	95							
152229	ATU0141 69	ATL8C31330:1215..1475	gap2	ATCEA4S15675	95							
152230	ATU0141 70	ATL8C16789:917..621	gap2	ATCEA4S30703	95							
152231	ATU0141 71	ATL8C40396:346..607	gap2	ATCEA4S25885	95							
152232	ATU0141 72	ATL8C27051:840..1887	gap2	ATCEA4C15117_1, ATCEA4S34652, ATCEA4S24452, ATCEA4S31130	95, 93, 90, 86							
152233	ATU0141 73	ATL8C16756:2491..2252	gap2	ATCEA4C3739_6	95							
152234	ATU0141 74	ATL8C46320:416..951	gap2	ATCEA4C18874_2, ATCEA4S3299	95, 82							
152235	ATU0141 75	ATL8S12452:1..110	gap2	ATCEA4C36038_1	95							
152236	ATU0141 76	ATL8C26043:1712..1161	gap2	ATCEA4C22829_1, ATCEA4S27179	95, 90							

152237	ATU0141177	ATL8C4475:898..1927	gap2	ATCEA4C121645_1	95							
152238	ATU0141178	ATL8C22479:87..560	gap2	ATCEA4S15242	95							
152239	ATU0141179	ATL8C26589:1026..608	gap2	ATCEA4C17692_1	95							
152240	ATU0141180	ATL8C31205:6094..5675	gap2	ATCEA4S1507	95							
152241	ATU0141181	ATL8C33238:1282..1994	gap2	ATCEA4C4269_1, ATCEA4C4269_2	95, 91							
152242	ATU0141182	ATL8C48328:1944..2185	gap2	ATCEA4C6164_1	95							
152243	ATU0141183	ATL8S13352:483..573	gap2	ATCEA4S5274	95							
152244	ATU0141184	ATL8C31166:1722..1344	gap2	ATCEA4C108083_1	95							
152245	ATU0141185	ATL8C48426:918..1666	gap2	ATCEA4C30042_1	95							
152246	ATU0141186	ATL8C11703:1..293	gap2	ATCEA4S4213	95							
152247	ATU0141187	ATL8C31135:3209..2751	gap2	ATCEA4C127385_2	95							

152248	ATU0141188	ATL8S27532:83..344	gap2	ATCEA4C18433_1	95							
152249	ATU0141189	ATL8C730:555..1	gap2	ATCEA4C146227_1	95							
152250	ATU0141190	ATL8S13729:106..488	gap2	ATCEA4S26971	95							
152251	ATU0141191	ATL8C31107:2095..2455	gap2	ATCEA4C63400_1	95							
152252	ATU0141192	ATL8C16619:406..797	gap2	ATCEA4C18856_1	95							
152253	ATU0141193	ATL8C44804:1890..1676	gap2	ATCEA4S32154	95							
152254	ATU0141194	ATL8S13806:385..11	gap2	ATCEA4S11832	95							
152255	ATU0141195	ATL8C37796:9..426	gap2	ATCEA4S3883	95							
152256	ATU0141196	ATL8C48249:118..377	gap2	ATCEA4C20635_1	95							
152257	ATU0141197	ATL8C7996:1081..1276	gap2	ATCEA4C17949_1	95							
152258	ATU0141198	ATL8S24910:157..578	gap2	ATCEA4S4663, ATCEA4C48992_1	95, 86							
152259	ATU0141199	ATL8S26296:583..25	gap2	ATCEA4C151444_2,	95, 83							

		1		ATCEA4C151444_1								
152260	ATU014200	ATL8C34745:180..1	gap2	ATCEA4S5804	95							
152261	ATU014201	ATL8S14031:302..97	gap2	ATCEA4C725_1	95							
152262	ATU014202	ATL8C44670:408..971	gap2	ATCEA4S20320, ATCEA4C6497_1	95, 91							
152263	ATU014203	ATL8C12282:626..98	gap2	ATCEA4S8908	95							
152264	ATU014204	ATL8C44659:410..1	gap2	ATCEA4C4592_1	95							
152265	ATU014205	ATL8C13449:5763..5970	gap2	ATCEA4C120199_1	95							
152266	ATU014206	ATL8C41918:630..851	gap2	ATCEA4S26478	95							
152267	ATU014207	ATL8C23508:1236..156	gap2	ATCEA4S7053	94	ATL8C23508:983..458	1.00	g4249380	99	153	5.6e-12	(AC005966) ESTs gb|Z37637, gb|AA042498 and gb|AA042269 come from this gene. [Arabi

												dopsis thaliana]
152268	ATU0142208	ATL8C38666:1054..1285	gap2	ATCEA4C135469_1	95							
152269	ATU0142209	ATL8C40419:387..1	gap2	ATCEA4S4779	95							
152270	ATU0142210	ATL8C26702:983..737	gap2	ATCEA4S3261	95							
152271	ATU0142211	ATL8C42867:316..1	gap2	ATCEA4C17028_1	95							
152272	ATU0142212	ATL8C5949:1431..1808	gap2	ATCEA4C6669_1	95							
152273	ATU0142213	ATL8C36036:647..340	gap2	ATCEA4S35227, ATCEA4C65573_1	95, 92							
152274	ATU0142214	ATL8C41381:1..145	gap2	ATCEA4S2352	95							
152275	ATU0142215	ATL8C40248:531..316	gap2	ATCEA4C66239_1	95							
152276	ATU0142216	ATL8C45022:647..1114	gap2	ATCEA4S5015	95							
152277	ATU0142217	ATL8C30963:9979..9272	gap2	ATCEA4C17516_1	95							
152278	ATU0142218	ATL8C26013:2	gap2	ATCEA4C81432	95							

		066..1938		_1								
152279	ATU0142219	ATL8S26220:1..184	gap2	ATCEA4S1306	95							
152280	ATU0142220	ATL8C5968:3548..3187	gap2	ATCEA4C127156_1	95							
152281	ATU0142221	ATL8C18947:1524..1953	gap2	ATCEA4S24731, ATCEA4C5298_2	95, 91							
152282	ATU0142222	ATL8C26740:1789..2053	gap2	ATCEA4C104893_1	95							
152283	ATU0142223	ATL8C30886:854..478	gap2	ATCEA4S30554	95							
152284	ATU0142224	ATL8S1430:103..575	gap2	ATCEA4C40864_1	95							
152285	ATU0142225	ATL8C44578:178..681	gap2	ATCEA4C985_1	95							
152286	ATU0142226	ATL8C48229:932..1114	gap2	ATCEA4S22593	95							
152287	ATU0142227	ATL8C44148:1..133	gap2	ATCEA4C52206_1	95							
152288	ATU0142228	ATL8C34660:855..1189	gap2	ATCEA4S26896	95							
152289	ATU0142229	ATL8C22535:660..44	gap2	ATCEA4S33451	95							

		8										
152290	ATU014230	ATL8C48182:553..822	gap2	ATCEA4S10829	95							
152291	ATU014231	ATL8C26018:933..109	gap2	ATCEA4C30890_1	95							
152292	ATU014232	ATL8C6508:1295..1	gap2	ATCEA4C121037_1	95							
152293	ATU014233	ATL8C39602:1339..1549	gap2	ATCEA4S15172	95							
152294	ATU014234	ATL8C4456:461..1483	gap2	ATCEA4S33445	94			g4220525	100	660	3.0e-64	(AL035356) putative tRNA isopentenyltransferase [Arabidopsis thaliana]
152295	ATU014235	ATL8C48181:601..970	gap2	ATCEA4S12313	95							
152296	ATU014236	ATL8C26798:858..548	gap2	ATCEA4S26486	95							
152297	ATU014237	ATL8C12222:1..274	gap2	ATCEA4S2437	95							
152298	ATU014238	ATL8C30654:1312..1396	gap2	ATCEA4S13153	95							

152299	ATU0142239	ATL8S25693:364..581	gap2	ATCEA4C23680_1	95							
152300	ATU0142240	ATL8C30582:742..293	gap2	ATCEA4C17831_1	95							
152301	ATU0142241	ATL8C14363:2826..2469	gap2	ATCEA4S11222	95							
152302	ATU0142242	ATL8S14517:1..65	gap2	ATCEA4C26089_1	95							
152303	ATU0142243	ATL8C27012:292..814	gap2	ATCEA4C9059_1, ATCEA4S35027	95, 93							
152304	ATU0142244	ATL8S9357:385..521	gap2	ATCEA4S6260	95							
152305	ATU0142245	ATL8C45382:449..131	gap2	ATCEA4S36005	95							
152306	ATU0142246	ATL8C23549:448..94	gap2	ATCEA4S33191	95							
152307	ATU0142247	ATL8C22030:1..115	gap2	ATCEA4C82607_1, ATCEA4S10428	95, 85							
152308	ATU0142248	ATL8S14554:246..1	gap2	ATCEA4C105704_1	95							
152309	ATU0142249	ATL8C16327:2596..2744	gap2	ATCEA4S27452	95							
152310	ATU0142250	ATL8C19099:1	gap2	ATCEA4C383_1	95							

		562..1747										
152311	ATU014251	ATL8S14764:387..1	gap2	ATCEA4C31672_1	95							
152312	ATU014252	ATL8C12135:687..1071	gap2	ATCEA4C30519_1, ATCEA4S10635	95, 84							
152313	ATU014253	ATL8C2765:71..166	gap2	ATCEA4C11924_1	95							
152314	ATU014254	ATL8C23608:1..1143	gap2	ATCEA4C47571_1, ATCEA4C47571_2	95, 88							
152315	ATU014255	ATL8S917:469..104	gap2	ATCEA4S2325	95							
152316	ATU014256	ATL8C30489:292..585	gap2	ATCEA4S12402	95							
152317	ATU014257	ATL8C30465:797..868	gap2	ATCEA4S1648	95							
152318	ATU014258	ATL8C21724:3795..4368	gap2	ATCEA4C70250_1	95							
152319	ATU014259	ATL8C16268:960..1200	gap2	ATCEA4C46505_1	95							
152320	ATU014260	ATL8C19133:4823..4441	gap2	ATCEA4S33844, ATCEA4S6922	95, 88							
152321	ATU014	ATL8C1	gap2	ATCEA4	95							

	261	8746:1..395		C67_1								
152322	ATU0142262	ATL8C17589:1379..1086	gap2	ATCEA4C78185_1	95							
152323	ATU0142263	ATL8C45623:395..142	gap2	ATCEA4S777	95							
152324	ATU0142264	ATL8C20872:158..1	gap2	ATCEA4S36272	95							
152325	ATU0142265	ATL8S29468:401..516	gap2	ATCEA4C1852_1	95							
152326	ATU0142266	ATL8S14903:1..236	gap2	ATCEA4S32916	95							
152327	ATU0142267	ATL8C45675:1457..2069	gap2	ATCEA4S12506	95							
152328	ATU0142268	ATL8S24761:16..474	gap2	ATCEA4C68384_2	95							
152329	ATU0142269	ATL8S20302:1..174	gap2	ATCEA4S30121	95							
152330	ATU0142270	ATL8C30182:697..602	gap2	ATCEA4S29778	95							
152331	ATU0142271	ATL8C10475:3941..1682	gap2	ATCEA4C65602_1, ATCEA4S34517	94, 91			g2245084	100	2078		(Z97343) hypothetical protein [Arabidopsis thaliana]

152332	ATU014272	ATL8C34532:1965..2510	gap2	ATCEA4S441	95							
152333	ATU014273	ATL8C45783:789..1145	gap2	ATCEA4S178	95							
152334	ATU014274	ATL8S20510:510..446	gap2	ATCEA4S14032	95							
152335	ATU014275	ATL8C38616:404..1	gap2	ATCEA4C1756_1	95							
152336	ATU014276	ATL8C10997:2707..4109	gap2	ATCEA4C9679_1	95							
152337	ATU014277	ATL8C6009:270..483	gap2	ATCEA4C33998_1	95							
152338	ATU014278	ATL8S20698:1..126	gap2	ATCEA4S32822	95							
152339	ATU014279	ATL8S15002:192..107	gap2	ATCEA4S35300	95							
152340	ATU014280	ATL8S20743:256..1	gap2	ATCEA4S12700	95							
152341	ATU014281	ATL8S15041:249..1	gap2	ATCEA4C15876_1	95							
152342	ATU014282	ATL8C30025:1102..385	gap2	ATCEA4C8278_1	95							
152343	ATU014283	ATL8S20893:1..151	gap2	ATCEA4S3470, ATCEA4S25913	95, 84							
152344	ATU014	ATL8S2	gap2	ATCEA4	95							

	284	1011:8 6..214		S5012								
152345	ATU014 285	ATL8C2 1650:2 879..1 928	gap2	ATCEA4 C1120_ 3	95							
152346	ATU014 286	ATL8C4 6010:4 124..3 579	gap2	ATCEA4 S26823	95							
152347	ATU014 287	ATL8C4 813:26 97..29 87	gap2	ATCEA4 C17569 _5	95							
152348	ATU014 288	ATL8C4 9890:7 27..92 1	gap2	ATCEA4 C18192 _1	95							
152349	ATU014 289	ATL8C4 8123:3 45..1	gap2	ATCEA4 S695	95							
152350	ATU014 290	ATL8S2 1512:5 68..22 1	gap2	ATCEA4 C7287_ 1	95							
152351	ATU014 291	ATL8S2 1556:2 20..12 4	gap2	ATCEA4 S28947	95							
152352	ATU014 292	ATL8C1 6227:1 114..1 269	gap2	ATCEA4 C36932 _1, ATCEA4 S7349	95, 94							
152353	ATU014 293	ATL8S1 5099:4 50..25 7	gap2	ATCEA4 S5023	95							
152354	ATU014 294	ATL8S1 5114:2 27..34 0	gap2	ATCEA4 C56967 _1	95							
152355	ATU014 295	ATL8C2 3395:7	gap2	ATCEA4 S1448	95							

		23..1002										
152356	ATU014296	ATL8C9986:1021..1308	gap2	ATCEA4C23689_1	95							
152357	ATU014297	ATL8S9113:514..113	gap2	ATCEA4S5611	95							
152358	ATU014298	ATL8C39387:1..397	gap2	ATCEA4S28059, ATCEA4C256_1, ATCEA4S36019	95, 95, 94							
152359	ATU014299	ATL8C18464:106..335	gap2	ATCEA4S26131, ATCEA4C98186_1	95, 90							
152360	ATU014300	ATL8C21133:2107..1720	gap2	ATCEA4S15700	95							
152361	ATU014301	ATL8S22068:686..26	gap2	ATCEA4S6291	95							
152362	ATU014302	ATL8C46112:1275..1365	gap2	ATCEA4S27458	95							
152363	ATU014303	ATL8C42354:156..365	gap2	ATCEA4C50423_1	95							
152364	ATU014304	ATL8C34439:100..1	gap2	ATCEA4C10317_1	95							
152365	ATU014305	ATL8C13354:60..320	gap2	ATCEA4S26166	95							

152366	ATU0143306	ATL8S9022:114..1	gap2	ATCEA4C685_3	95							
152367	ATU0143307	ATL8S8971:436..1	gap2	ATCEA4S28732	95							
152368	ATU0143308	ATL8C16176:175..522	gap2	ATCEA4S10633	95							
152369	ATU0143309	ATL8S12973:226..559	gap2	ATCEA4S1261, ATCEA4S2394	95, 93							
152370	ATU0143310	ATL8C16171:870..1049	gap2	ATCEA4C4541_1, ATCEA4S35388	95, 93							
152371	ATU0143311	ATL8S22568:54..199	gap2	ATCEA4S705	95							
152372	ATU0143312	ATL8S2921:1..603	gap2	ATCEA4S33151, ATCEA4S29123	95, 87							
152373	ATU0143313	ATL8C34399:410..329	gap2	ATCEA4S2800	95							
152374	ATU0143314	ATL8C34379:1859..2181	gap2	ATCEA4S2135	95							
152375	ATU0143315	ATL8S2297:261..1	gap2	ATCEA4S35836	95							
152376	ATU0143316	ATL8S891:387..533	gap2	ATCEA4S34957	95							
152377	ATU0143317	ATL8S23030:263..1	gap2	ATCEA4S10999	95							

152378	ATU0143 18	ATL8C4629:643..215	gap2	ATCEA4C14433_1	95							
152379	ATU0143 19	ATL8C14588:1160..1498	gap2	ATCEA4S29715	95							
152380	ATU0143 20	ATL8S8849:204..346	gap2	ATCEA4C78668_1	95							
152381	ATU0143 21	ATL8C40583:165..624	gap2	ATCEA4S34867	95							
152382	ATU0143 22	ATL8C26946:562..173	gap2	ATCEA4C30524_1	95							
152383	ATU0143 23	ATL8S8778:1..69	gap2	ATCEA4C6036_1	95							
152384	ATU0143 24	ATL8C28870:1163..1451	gap2	ATCEA4C368_1	95							
152385	ATU0143 25	ATL8S23213:295..1	gap2	ATCEA4S5396	95							
152386	ATU0143 26	ATL8C26968:1455..1884	gap2	ATCEA4S33540, ATCEA4S29744	95, 91							
152387	ATU0143 27	ATL8C46363:2425..2546	gap2	ATCEA4S13835	95							
152388	ATU0143 28	ATL8C42790:2221..4316	gap2	ATCEA4C36525_1, ATCEA4C34737_2, ATCEA4	94, 87, 82			g4895236	100	2960	1.1e-226	(AC007659) unknown protein [Arabi

				C34737_1								dopsis thaliana]
152389	ATU0143329	ATL8C46396:259..631	gap2	ATCEA4S12295	95							
152390	ATU0143330	ATL8C29515:342..80	gap2	ATCEA4S24591	95							
152391	ATU0143331	ATL8C34332:416..882	gap2	ATCEA4C134932_1	95							
152392	ATU0143332	ATL8C31942:4..392	gap2	ATCEA4S30383	95							
152393	ATU0143333	ATL8S23509:98..1	gap2	ATCEA4S9056	95							
152394	ATU0143334	ATL8C34475:549..1	gap2	ATCEA4C129_3, ATCEA4S32473, ATCEA4S8016, ATCEA4S29815	95, 90, 88, 85							
152395	ATU0143335	ATL8C29453:919..1014	gap2	ATCEA4S32035	95							
152396	ATU0143336	ATL8C10937:1576..1813	gap2	ATCEA4S22044	95							
152397	ATU0143337	ATL8C14464:1288..1635	gap2	ATCEA4S7	95							
152398	ATU0143338	ATL8C10372:2	gap2	ATCEA4S26673	95, 88							

		746..2193		, ATCEA4S18854								
152399	ATU014339	ATL8C12709:2355..1937	gap2	ATCEA4S26021	95							
152400	ATU014340	ATL8C32890:174..399	gap2	ATCEA4S31624	95							
152401	ATU014341	ATL8S8319:14..459	gap2	ATCEA4S759	95							
152402	ATU014342	ATL8C34267:952..1	gap2	ATCEA4C25635_1	95							
152403	ATU014343	ATL8C23240:355..745	gap2	ATCEA4C5275_1	95							
152404	ATU014344	ATL8C38277:621..241	gap2	ATCEA4S4812	95							
152405	ATU014345	ATL8C34261:6318..6143	gap2	ATCEA4C34163_1	95							
152406	ATU014346	ATL8C26204:1620..2545	gap2	ATCEA4S7640, ATCEA4S7975	95, 93							
152407	ATU014347	ATL8S25163:460..42	gap2	ATCEA4S4932	95							
152408	ATU014348	ATL8S9741:261..445	gap2	ATCEA4C46515_1	95							
152409	ATU014349	ATL8C29307:277..186	gap2	ATCEA4S7359	95							
152410	ATU014	ATL8C1	gap2	ATCEA4	95							

	350	5891:700..450		S1953								
152411	ATU014351	ATL8C46631:601..86	gap2	ATCEA4C5850_1	95							
152412	ATU014352	ATL8C15881:4464..3974	gap2	ATCEA4C1140_1	95							
152413	ATU014353	ATL8C46636:102..1	gap2	ATCEA4S24791	95							
152414	ATU014354	ATL8C3924:1..87	gap2	ATCEA4C5484_1	95							
152415	ATU014355	ATL8S5402:376..574	gap2	ATCEA4C74399_1	95							
152416	ATU014356	ATL8C34259:274..913	gap2	ATCEA4C24054_1, ATCEA4C17551_1	95, 88							
152417	ATU014357	ATL8C14038:2741..3368	gap2	ATCEA4C18662_3, ATCEA4C18662_1, ATCEA4S18470, ATCEA4C18662_2	95, 92, 87, 87							
152418	ATU014358	ATL8C29170:256..1	gap2	ATCEA4S36121	95							
152419	ATU014359	ATL8C6980:1..432	gap2	ATCEA4S7185	95							
152420	ATU014	ATL8C4	gap2	ATCEA4	95							

	360	6667:6 54..33 4		S8298								
152421	ATU014 361	ATL8C4 0600:5 61..18 1	gap2	ATCEA4 S13480	95							
152422	ATU014 362	ATL8S2 5968:5 90..34 4	gap2	ATCEA4 S30161	95							
152423	ATU014 363	ATL8C3 2239:1 42..1	gap2	ATCEA4 C14673 _1	95							
152424	ATU014 364	ATL8C2 419:10 40..15 57	gap2	ATCEA4 C10178 3_1	95							
152425	ATU014 365	ATL8C4 0727:4 65..92	gap2	ATCEA4 S11299	95							
152426	ATU014 366	ATL8C1 132:38 8..828	gap2	ATCEA4 C65252 _1	95							
152427	ATU014 367	ATL8S7 753:13 8..220	gap2	ATCEA4 S28947	95							
152428	ATU014 368	ATL8C5 403:14 26..16 38	gap2	ATCEA4 S1446	95							
152429	ATU014 369	ATL8S7 750:32 0..609	gap2	ATCEA4 C13058 4_1	95							
152430	ATU014 370	ATL8C1 5751:4 33..92 9	gap2	ATCEA4 C13092 _1	95							
152431	ATU014 371	ATL8C2 4276:2 536..2 867	gap2	ATCEA4 C7270_ 1	95							
152432	ATU014 372	ATL8S1 6517:4	gap2	ATCEA4 S30548	95							

		96..139										
152433	ATU0143373	ATL8C1105:1515..1730	gap2	ATCEA4C22774_1	95							
152434	ATU0143374	ATL8C15654:374..1	gap2	ATCEA4S5920	95							
152435	ATU0143375	ATL8C27133:810..519	gap2	ATCEA4S10744	95							
152436	ATU0143376	ATL8C24144:1334..1823	gap2	ATCEA4S2388	95							
152437	ATU0143377	ATL8C5211:1..517	gap2	ATCEA4S34002	95							
152438	ATU0143378	ATL8C14159:1..308	gap2	ATCEA4C55829_1	95							
152439	ATU0143379	ATL8S721:478..371	gap2	ATCEA4S34826	95							
152440	ATU0143380	ATL8C2412:1..160	gap2	ATCEA4S3551	95							
152441	ATU0143381	ATL8C13567:8523..8386	gap2	ATCEA4S253	95							
152442	ATU0143382	ATL8C5210:161..1	gap2	ATCEA4C119533_1	95							
152443	ATU0143383	ATL8C35843:224..1	gap2	ATCEA4C18308_1	95							
152444	ATU0143384	ATL8C27151:93..1	gap2	ATCEA4S662	95							
152445	ATU0143385	ATL8C17280:3	gap2	ATCEA4C584_1	95, 91							

		23..900		, ATCEA4S29010								
152446	ATU014386	ATL8C47864:4591..5310	gap2	ATCEA4C2517_1	95							
152447	ATU014387	ATL8C1554:1713..2026	gap2	ATCEA4S18694	95							
152448	ATU014388	ATL8C5520:1121..585	gap2	ATCEA4S5010	95							
152449	ATU014389	ATL8S17057:207..548	gap2	ATCEA4C30503_1	95							
152450	ATU014390	ATL8C20811:6315..6188	gap2	ATCEA4C4910_1	95							
152451	ATU014391	ATL8C21994:1..339	gap2	ATCEA4C11745_1	95							
152452	ATU014392	ATL8C35761:668..516	gap2	ATCEA4C50685_1	95							
152453	ATU014393	ATL8S17149:306..210	gap2	ATCEA4S14581	95							
152454	ATU014394	ATL8S7019:171..86	gap2	ATCEA4S36264	95							
152455	ATU014395	ATL8C15485:221..1	gap2	ATCEA4C116836_1	95							
152456	ATU014396	ATL8C453:371..1	gap2	ATCEA4C41_1	95							
152457	ATU014	ATL8S6	gap2	ATCEA4	95							

	397	651:84..1		S32323								
152458	ATU014398	ATL8C4125:231..752	gap2	ATCEA4S5535	95							
152459	ATU014399	ATL8C7067:461..716	gap2	ATCEA4S3986	95							
152460	ATU014400	ATL8S13498:256..1	gap2	ATCEA4C1956_1, ATCEA4S14838	95, 92							
152461	ATU014401	ATL8C37736:536..257	gap2	ATCEA4S26489	95							
152462	ATU014402	ATL8S6579:146..51	gap2	ATCEA4S29070	95							
152463	ATU014403	ATL8C24437:23..670	gap2	ATCEA4C129795_1	95							
152464	ATU014404	ATL8S1751:1..82	gap2	ATCEA4S2151	95							
152465	ATU014405	ATL8C5124:391..509	gap2	ATCEA4C25661_1	95							
152466	ATU014406	ATL8S17564:191..1	gap2	ATCEA4S10689	95							
152467	ATU014407	ATL8C11089:1..124	gap2	ATCEA4S2670	95							
152468	ATU014408	ATL8C5711:236..483	gap2	ATCEA4S28763, ATCEA4S32817	95, 95							
152469	ATU014409	ATL8C32947:1226..1778	gap2	ATCEA4C18637_1	95							

152470	ATU014410	ATL8C21324:709..177	gap2	ATCEA4C2443_1	95							
152471	ATU014411	ATL8C20986:735..1	gap2	ATCEA4C1887_3, ATCEA4S36370	95, 91							
152472	ATU014412	ATL8C760:741..483	gap2	ATCEA4S569	95							
152473	ATU014413	ATL8C7814:1041..1319	gap2	ATCEA4C20858_1	95							
152474	ATU014414	ATL8C10963:1909..2215	gap2	ATCEA4S31407	95							
152475	ATU014415	ATL8C24565:1533..1291	gap2	ATCEA4C74676_1	95							
152476	ATU014416	ATL8S7696:559..1	gap2	ATCEA4S34390, ATCEA4C18897_1	95, 94							
152477	ATU014417	ATL8S22020:1..182	gap2	ATCEA4C17887_2	95							
152478	ATU014418	ATL8C41085:995..566	gap2	ATCEA4S11020	95							
152479	ATU014419	ATL8C31532:405..604	gap2	ATCEA4C3797_1	95							
152480	ATU014420	ATL8C49199:1..372	gap2	ATCEA4S27811,	95, 91							

				ATCEA4S32600								
152481	ATU0144421	ATL8C7219:815..430	gap2	ATCEA4S19249	95							
152482	ATU0144422	ATL8C24633:546..1097	gap2	ATCEA4C4838_1	95							
152483	ATU0144423	ATL8S924:1..94	gap2	ATCEA4C53825_1, ATCEA4S14506	95, 90							
152484	ATU0144424	ATL8C22782:1..163	gap2	ATCEA4C18656_1	95							
152485	ATU0144425	ATL8C389:790..106	gap2	ATCEA4S14335	95							
152486	ATU0144426	ATL8C24640:344..984	gap2	ATCEA4C99415_1	95							
152487	ATU0144427	ATL8S17830:248..1	gap2	ATCEA4S30918	95							
152488	ATU0144428	ATL8C10941:1188..1711	gap2	ATCEA4C115950_1	95							
152489	ATU0144429	ATL8C6919:250..1	gap2	ATCEA4S26503	95							
152490	ATU0144430	ATL8C34087:2178..2033	gap2	ATCEA4C85840_1	95							
152491	ATU0144431	ATL8C43559:294..1	gap2	ATCEA4C7395_1, ATCEA4S14997	95, 94							
152492	ATU014	ATL8C2	gap2	ATCEA4	95							

	432	1267:2319..1994		C9161_1								
152493	ATU014433	ATL8C6615:1..539	gap2	ATCEA4C828_7, ATCEA4S24558	95, 89							
152494	ATU014434	ATL8C8062:1340..1143	gap2	ATCEA4S26040	95							
152495	ATU014435	ATL8C35678:244..1	gap2	ATCEA4C7420_1	95							
152496	ATU014436	ATL8C50127:1..190	gap2	ATCEA4C100931_3	95							
152497	ATU014437	ATL8C37042:461..799	gap2	ATCEA4C89152_1	95							
152498	ATU014438	ATL8C32795:7302..6724	gap2	ATCEA4C128829_1	95							
152499	ATU014439	ATL8C24688:386..635	gap2	ATCEA4S12710	95							
152500	ATU014440	ATL8C42003:445..785	gap2	ATCEA4S25800	95							
152501	ATU014441	ATL8S23288:114..647	gap2	ATCEA4S35240, ATCEA4C120218_1, ATCEA4S26039	95, 89, 86							
152502	ATU014442	ATL8C7112:33	gap2	ATCEA4C47185	95							

		2..484		_1								
152503	ATU0144 43	ATL8C31846:1717..1962	gap2	ATCEA4C39274_1	95							
152504	ATU0144 44	ATL8C36367:1646..1863	gap2	ATCEA4C6509_2, ATCEA4C6509_1	95, 88							
152505	ATU0144 45	ATL8S11674:149..595	gap2	ATCEA4C17995_1	95							
152506	ATU0144 46	ATL8S5861:511..418	gap2	ATCEA4S12231	95							
152507	ATU0144 47	ATL8C31820:119..1	gap2	ATCEA4S12285	95							
152508	ATU0144 48	ATL8C8248:1..113	gap2	ATCEA4S5220	95							
152509	ATU0144 49	ATL8C20741:298..1	gap2	ATCEA4S33362	95							
152510	ATU0145 0	ATL8S5856:163..261	gap2	ATCEA4S3084	95							
152511	ATU0145 1	ATL8S5789:284..726	gap2	ATCEA4C45727_1	95							
152512	ATU0145 2	ATL8C31218:419..766	gap2	ATCEA4C11143_1	95							
152513	ATU0145 3	ATL8C20732:1314..917	gap2	ATCEA4S11938	95							
152514	ATU0145 4	ATL8S8832:491..438	gap2	ATCEA4C31008_1	95							

152515	ATU0144455	ATL8S18621:178..424	gap2	ATCEA4S12835	95							
152516	ATU0144456	ATL8C27740:1583..2271	gap2	ATCEA4C63633_1, ATCEA4S28134	95, 94							
152517	ATU0144457	ATL8S5716:204..41	gap2	ATCEA4C2428_1	95							
152518	ATU0144458	ATL8C20675:2273..2136	gap2	ATCEA4S253	95							
152519	ATU0144459	ATL8C47727:1330..1039	gap2	ATCEA4S30341	95							
152520	ATU0144460	ATL8C27461:732..472	gap2	ATCEA4S27861	95							
152521	ATU0144461	ATL8S17120:558..1	gap2	ATCEA4C33455_1, ATCEA4S12274	95, 92							
152522	ATU0144462	ATL8C8338:9199..9413	gap2	ATCEA4S32154	95							
152523	ATU0144463	ATL8C10883:2316..1982	gap2	ATCEA4S30015	95							
152524	ATU0144464	ATL8S5269:418..156	gap2	ATCEA4S784	95							
152525	ATU0144465	ATL8C20626:703..580	gap2	ATCEA4S8188	95							

152526	ATU0144466	ATL8C5728:375..498	gap2	ATCEA4C63254_2, ATCEA4C63254_1	95, 91							
152527	ATU0144467	ATL8S473:372..576	gap2	ATCEA4S25800	95							
152528	ATU0144468	ATL8C14798:5589..5513	gap2	ATCEA4S11971	95							
152529	ATU0144469	ATL8C14798:4251..3745	gap2	ATCEA4C40437_1	95							
152530	ATU0144470	ATL8C11372:958..1570	gap2	ATCEA4C11298_1	95							
152531	ATU0144471	ATL8C37155:4101..4701	gap2	ATCEA4C86960_1, ATCEA4S33622	95, 87							
152532	ATU0144472	ATL8C27577:345..81	gap2	ATCEA4C20018_1	95							
152533	ATU0144473	ATL8C33537:882..1049	gap2	ATCEA4S2478, ATCEA4C460_1	95, 93							
152534	ATU0144474	ATL8C35337:1109..1281	gap2	ATCEA4S8110	95							
152535	ATU0144475	ATL8C11393:983..682	gap2	ATCEA4S33205	95							
152536	ATU0144476	ATL8S19339:615..12	gap2	ATCEA4C20645_1	95							

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152537	ATU0144 77	ATL8C17175:1230..415	gap2	ATCEA4C4517_1	95							
152538	ATU0144 78	ATL8C37140:507..1378	gap2	ATCEA4C120154_1, ATCEA4S31274	95, 88							
152539	ATU0144 79	ATL8C24909:748..192	gap2	ATCEA4S18241	95							
152540	ATU0144 80	ATL8S4533:341..1	gap2	ATCEA4C6749_1	95							
152541	ATU0144 81	ATL8C37670:1..90	gap2	ATCEA4S22109	95							
152542	ATU0144 82	ATL8C8480:1824..1418	gap2	ATCEA4S14543	95							
152543	ATU0144 83	ATL8C8516:740..1241	gap2	ATCEA4S36336	95							
152544	ATU0144 84	ATL8C27203:1..302	gap2	ATCEA4C87136_1	95							
152545	ATU0144 85	ATL8C42113:2243..1799	gap2	ATCEA4C30041_1	95							
152546	ATU0144 86	ATL8C12613:1119..734	gap2	ATCEA4S4110	95							
152547	ATU0144 87	ATL8S18956:1..235	gap2	ATCEA4S24852, ATCEA4C45092	95, 95, 93, 88							

				_2, ATCEA4 C45092 _1, ATCEA4 S31973								
152548	ATU014 488	ATL8S1 6125:3 93..48 3	gap2	ATCEA4 C4441_ 3	95							
152549	ATU014 489	ATL8C4 2258:1 159..7 87	gap2	ATCEA4 C814_1 , ATCEA4 S7995	95, 83							
152550	ATU014 490	ATL8C8 584:97 5..686	gap2	ATCEA4 S3937	95							
152551	ATU014 491	ATL8C4 5404:2 16..13 3	gap2	ATCEA4 S16222 , ATCEA4 S31041	95, 92							
152552	ATU014 492	ATL8S1 7253:1 79..1	gap2	ATCEA4 C62185 _1, ATCEA4 S10578 , ATCEA4 S31209	95, 95, 93							
152553	ATU014 493	ATL8C4 7601:4 41..1	gap2	ATCEA4 C28887 _1	95							
152554	ATU014 494	ATL8C8 587:17 13..15 76	gap2	ATCEA4 S253	95							
152555	ATU014 495	ATL8C4 1523:6 52..83	gap2	ATCEA4 C11003 _1	95							
152556	ATU014 496	ATL8S1 8049:4 46..57	gap2	ATCEA4 C2065_ 1	95							

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152557	ATU0144 97	ATL8C29252:97..488	gap2	ATCEA4C134568_1	95							
152558	ATU0144 98	ATL8S27315:73..1	gap2	ATCEA4C20067_1	95							
152559	ATU0144 99	ATL8C14727:10734..11097	gap2	ATCEA4S126	95							
152560	ATU0145 00	ATL8C27679:981..1738	gap2	ATCEA4C71083_1	95							
152561	ATU0145 01	ATL8C42144:545..41	gap2	ATCEA4C27722_1	95							
152562	ATU0145 02	ATL8C866:1560..1733	gap2	ATCEA4S4478	95							
152563	ATU0145 03	ATL8C37586:1..143	gap2	ATCEA4S3596	95							
152564	ATU0145 04	ATL8C38947:285..518	gap2	ATCEA4C13700_1	95							
152565	ATU0145 05	ATL8C49752:2136..2422	gap2	ATCEA4S30306	95							
152566	ATU0145 06	ATL8C2769:1083..618	gap2	ATCEA4C29688_1	95							
152567	ATU0145 07	ATL8C30459:446..1	gap2	ATCEA4C73417_1	95							
152568	ATU0145 08	ATL8C22884:3317..2954	gap2	ATCEA4S27315	95							

152569	ATU0145509	ATL8C31187:1012..1099	gap2	ATCEA4C19227_1	95							
152570	ATU0145510	ATL8C37543:1..517	gap2	ATCEA4C4627_1	95							
152571	ATU0145511	ATL8C41028:841..422	gap2	ATCEA4S35009	95							
152572	ATU0145512	ATL8C30477:1817..2220	gap2	ATCEA4C76410_1	95							
152573	ATU0145513	ATL8C49748:1692..1369	gap2	ATCEA4S11995	95							
152574	ATU0145514	ATL8C27734:443..1049	gap2	ATCEA4C13816_1	95							
152575	ATU0145515	ATL8C38142:1217..1599	gap2	ATCEA4C64798_1	95							
152576	ATU0145516	ATL8C7642:366..13	gap2	ATCEA4S4467	95							
152577	ATU0145517	ATL8C12323:954..359	gap2	ATCEA4S32769, ATCEA4C67296_1	95, 92							
152578	ATU0145518	ATL8C25793:72..514	gap2	ATCEA4C71271_2, ATCEA4C71271_1	95, 86							
152579	ATU0145519	ATL8C42152:7	gap2	ATCEA4S7419	95							

		20..1032										
152580	ATU0145 20	ATL8C36569:1..524	gap2	ATCEA4S33830, ATCEA4S13996, ATCEA4C90888_1	95, 94, 86							
152581	ATU0145 21	ATL8C26475:848..1079	gap2	ATCEA4C16385_1	95							
152582	ATU0145 22	ATL8C27734:1291..2229	gap2	ATCEA4C23369_1	95							
152583	ATU0145 23	ATL8C45378:452..149	gap2	ATCEA4C7659_2	95							
152584	ATU0145 24	ATL8S26279:513..574	gap2	ATCEA4C72220_1	95							
152585	ATU0145 25	ATL8C3704:1454..2149	gap2	ATCEA4C101246_1, ATCEA4C101246_2	95, 91							
152586	ATU0145 26	ATL8C2450:2831..861	gap2	ATCEA4S31256, ATCEA4S34266	94, 92			g2129735	100	2931	2.6e-298	serine/threonine-specific kinase (EC 2.7.1.-) precursor -

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152587	ATU014527	ATL8C20797:509..79	gap2	ATCEA4C19919_1, ATCEA4S35718	95, 89							
152588	ATU014528	ATL8C6761:256..456	gap2	ATCEA4C36163_1, ATCEA4C36163_3	95, 95							
152589	ATU014529	ATL8C8737:475..293	gap2	ATCEA4C8193_1	95							
152590	ATU014530	ATL8C4748:1090..1394	gap2	ATCEA4S14721, ATCEA4S33585	95, 84							
152591	ATU014531	ATL8C14699:495..561	gap2	ATCEA4S30909	95							
152592	ATU014532	ATL8C38136:1479..1687	gap2	ATCEA4C48049_1	95							
152593	ATU014533	ATL8C25054:401..583	gap2	ATCEA4S2543	95							
152594	ATU014534	ATL8C47471:408..557	gap2	ATCEA4S2749	95							
152595	ATU014	ATL8C3	gap2	ATCEA4	95							

	535	351:2975..3351		S2239								
152596	ATU014536	ATL8C42281:783..466	gap2	ATCEA4C54457_1, ATCEA4S33003, ATCEA4S28972	95, 95, 85							
152597	ATU014537	ATL8C47622:802..967	gap2	ATCEA4C27499_1	95							
152598	ATU014538	ATL8C3286:1..269	gap2	ATCEA4S26330, ATCEA4S25240, ATCEA4S17845	95, 93, 83							
152599	ATU014539	ATL8C3201:2223..1269	gap2	ATCEA4S36101, ATCEA4S7713, ATCEA4C48483_1	95, 85, 85							
152600	ATU014540	ATL8C47410:609..692	gap2	ATCEA4S7006	95							
152601	ATU014541	ATL8C49601:1..213	gap2	ATCEA4S32099	95							
152602	ATU014542	ATL8C42314:268..483	gap2	ATCEA4S32154	95							
152603	ATU014543	ATL8C27770:1	gap2	ATCEA4S6547	95							

		85..586										
152604	ATU014544	ATL8C15652:535..711	gap2	ATCEA4S494, ATCEA4C1861_1, ATCEA4C1861_5, ATCEA4S12138, ATCEA4S7338, ATCEA4S10099	95, 94, 92, 84, 82, 82							
152605	ATU014545	ATL8C33532:4282..4048	gap2	ATCEA4S30140	95							
152606	ATU014546	ATL8C8831:1280..735	gap2	ATCEA4S32539	95							
152607	ATU014547	ATL8S26951:367..462	gap2	ATCEA4C21716_1	95							
152608	ATU014548	ATL8C35733:1750..2219	gap2	ATCEA4S485	95							
152609	ATU014549	ATL8C39486:572..771	gap2	ATCEA4C25028_1	95							
152610	ATU014550	ATL8C22891:1..474	gap2	ATCEA4C98726_1	95							
152611	ATU014551	ATL8C40979:148..683	gap2	ATCEA4C6683_1	95							

152612	ATU0145552	ATL8C45281:1430..1605	gap2	ATCEA4C105837_1	95							
152613	ATU0145553	ATL8C1638:2384..2233	gap2	ATCEA4C8243_1	95							
152614	ATU0145554	ATL8C26867:134..588	gap2	ATCEA4C421_2	95							
152615	ATU0145555	ATL8C8855:465..1	gap2	ATCEA4C119353_1	95							
152616	ATU0145556	ATL8C47369:1053..1431	gap2	ATCEA4S35184	95							
152617	ATU0145557	ATL8C35442:83..1	gap2	ATCEA4C45397_1	95							
152618	ATU0145558	ATL8S16599:625..1	gap2	ATCEA4S23121, ATCEA4C97662_1	95, 90							
152619	ATU0145559	ATL8C679:619..33	gap2	ATCEA4C121385_1	95							
152620	ATU0145560	ATL8C19923:1..170	gap2	ATCEA4S4348	95							
152621	ATU0145561	ATL8C35114:167..705	gap2	ATCEA4C64495_1	95							
152622	ATU0145562	ATL8C19913:676..794	gap2	ATCEA4C18993_1	95							
152623	ATU0145563	ATL8C11482:6	gap2	ATCEA4C13906	95							

		58..244		7_1								
152624	ATU014564	ATL8C16765:91..1	gap2	ATCEA4C70733_2, ATCEA4S25218	95, 92							
152625	ATU014565	ATL8C23611:1505..1301	gap2	ATCEA4C46698_1	95							
152626	ATU014566	ATL8C27842:593..705	gap2	ATCEA4S31679	95							
152627	ATU014567	ATL8C40956:708..886	gap2	ATCEA4S31331	95							
152628	ATU014568	ATL8C27908:128..396	gap2	ATCEA4S31838	95							
152629	ATU014569	ATL8C49492:1000..1349	gap2	ATCEA4S13229	95							
152630	ATU014570	ATL8C42387:900..443	gap2	ATCEA4C97859_1	95							
152631	ATU014571	ATL8C2798:2389..1986	gap2	ATCEA4C120156_1	95							
152632	ATU014572	ATL8C6888:1853..2246	gap2	ATCEA4S10755, ATCEA4S5602	95, 89							
152633	ATU014573	ATL8C9017:988..665	gap2	ATCEA4S14145	95							
152634	ATU014	ATL8S2	gap2	ATCEA4	95, 89							

	574	5530:370..38		C25634_1, ATCEA4S2654								
152635	ATU014575	ATL8C3943:193..1	gap2	ATCEA4S3127	95							
152636	ATU014576	ATL8C10712:1..322	gap2	ATCEA4S11747	95							
152637	ATU014577	ATL8C2412:387..550	gap2	ATCEA4C22178_1	95							
152638	ATU014578	ATL8C1311:597..701	gap2	ATCEA4S6239	95							
152639	ATU014579	ATL8C25226:3356..3696	gap2	ATCEA4S11235	95							
152640	ATU014580	ATL8C9031:1916..2239	gap2	ATCEA4S29987, ATCEA4S33060	95, 85							
152641	ATU014581	ATL8C35549:859..1079	gap2	ATCEA4S1894	95							
152642	ATU014582	ATL8S3334:482..42	gap2	ATCEA4C18079_1	95							
152643	ATU014583	ATL8S3166:1..294	gap2	ATCEA4C121258_1	95							
152644	ATU014584	ATL8C9096:277..209	gap2	ATCEA4S22981	95							
152645	ATU014585	ATL8C9148:903..1310	gap2	ATCEA4S25349	95							
152646	ATU014586	ATL8C37334:1	gap2	ATCEA4C13039	95							

		415..862		1_1								
152647	ATU0145 87	ATL8C38988:608..378	gap2	ATCEA4S34556	95							
152648	ATU0145 88	ATL8C34181:453..86	gap2	ATCEA4S26909	95							
152649	ATU0145 89	ATL8C24058:1..522	gap2	ATCEA4C45707_1	95							
152650	ATU0145 90	ATL8C1280:1..584	gap2	ATCEA4C80102_1	95							
152651	ATU0145 91	ATL8C9164:994..1278	gap2	ATCEA4S7515	95							
152652	ATU0145 92	ATL8C35367:2509..2307	gap2	ATCEA4S31909	95							
152653	ATU0145 93	ATL8C25231:524..942	gap2	ATCEA4S24217	95							
152654	ATU0145 94	ATL8C42660:119..1	gap2	ATCEA4C19885_1	95							
152655	ATU0145 95	ATL8C9218:316..205	gap2	ATCEA4S5493	95							
152656	ATU0145 96	ATL8C38061:541..1286	gap2	ATCEA4C22255_1	95							
152657	ATU0145 97	ATL8S1420:489..62	gap2	ATCEA4C20086_2	95							
152658	ATU0145 98	ATL8S10740:1..155	gap2	ATCEA4S14234,ATCEA4	95, 88, 87							

				S25242, ATCEA4S20591								
152659	ATU014599	ATL8C49553:1118..981	gap2	ATCEA4C20609_1	95							
152660	ATU014600	ATL8C6967:746..1207	gap2	ATCEA4C117318_2, ATCEA4S35132	95, 94							
152661	ATU014601	ATL8C6452:1..401	gap2	ATCEA4C30662_1	95							
152662	ATU014602	ATL8C19633:165..374	gap2	ATCEA4S165	95							
152663	ATU014603	ATL8C47176:1633..1215	gap2	ATCEA4C9048_1	95							
152664	ATU014604	ATL8C17832:673..1	gap2	ATCEA4C6529_1	95							
152665	ATU014605	ATL8S21751:608..424	gap2	ATCEA4C1132_2	95							
152666	ATU014606	ATL8C20919:1556..1192	gap2	ATCEA4S30375	95							
152667	ATU014607	ATL8C9328:1..168	gap2	ATCEA4S14650	95							
152668	ATU014608	ATL8C42688:1..1352	gap2	ATCEA4C23689_1	95							
152669	ATU014609	ATL8C35080:799..34	gap2	ATCEA4S4952	95							

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152670	ATU014610	ATL8C13494:838..969	gap2	ATCEA4C7751_2	95							
152671	ATU014611	ATL8C30688:1167..576	gap2	ATCEA4S13837, ATCEA4C64341_1	95, 94							
152672	ATU014612	ATL8C22229:4386..4025	gap2	ATCEA4C15520_1	95							
152673	ATU014613	ATL8S27045:1..172	gap2	ATCEA4C34107_1, ATCEA4S29473	95, 93							
152674	ATU014614	ATL8C12492:105..457	gap2	ATCEA4S22483	95							
152675	ATU014615	ATL8C32091:1..68	gap2	ATCEA4C2666_2	95							
152676	ATU014616	ATL8C19344:523..973	gap2	ATCEA4C117863_1	95							
152677	ATU014617	ATL8S30398:1..431	gap2	ATCEA4S4963	95							
152678	ATU014618	ATL8C27392:1345..175	gap2	ATCEA4C7522_1	95							
152679	ATU014619	ATL8C42918:626..304	gap2	ATCEA4S18438	95							
152680	ATU014620	ATL8C10536:2	gap2	ATCEA4C7446	95							

		55..527		1								
152681	ATU014621	ATL8C12093:158..1	gap2	ATCEA4C58298_1	95							
152682	ATU014622	ATL8C28277:869..724	gap2	ATCEA4S10673	95							
152683	ATU014623	ATL8C47026:1285..930	gap2	ATCEA4S30050	95							
152684	ATU014624	ATL8C44690:207..67	gap2	ATCEA4C18601_1	95							
152685	ATU014625	ATL8S6059:478..1	gap2	ATCEA4S33782, ATCEA4C84916_1	95, 93							
152686	ATU014626	ATL8C48058:1501..599	gap2	ATCEA4C18311_1	95							
152687	ATU014627	ATL8C10580:6..207	gap2	ATCEA4S598	95							
152688	ATU014628	ATL8S642:1..171	gap2	ATCEA4C119155_1	95							
152689	ATU014629	ATL8C25362:732..1391	gap2	ATCEA4C26581_1	95							
152690	ATU014630	ATL8C24430:1..330	gap2	ATCEA4C498_1	95							
152691	ATU014631	ATL8C49334:538..682	gap2	ATCEA4S1051, ATCEA4S1056	95, 93							
152692	ATU014	ATL8C3	gap2	ATCEA4	95							

	632	8682:884..204		C117230_1								
152693	ATU014633	ATL8C8097:149..275	gap2	ATCEA4C49863_1	95							
152694	ATU014634	ATL8C25405:176..1	gap2	ATCEA4S12598	95							
152695	ATU014635	ATL8C28350:1210..866	gap2	ATCEA4S11664	95							
152696	ATU014636	ATL8C44723:1..127	gap2	ATCEA4C224_1	95							
152697	ATU014637	ATL8S22768:125..67	gap2	ATCEA4C21795_1	95							
152698	ATU014638	ATL8C13925:1..375	gap2	ATCEA4C1471_1	95							
152699	ATU014639	ATL8C19167:518..196	gap2	ATCEA4C75371_1	95							
152700	ATU014640	ATL8C4165:757..308	gap2	ATCEA4S33921, ATCEA4C28065_2	95, 93							
152701	ATU014641	ATL8C38023:1457..1089	gap2	ATCEA4S11178	95							
152702	ATU014642	ATL8C9641:3303..3166	gap2	ATCEA4S253	95							
152703	ATU014643	ATL8C28382:527..614	gap2	ATCEA4S1361	95							

152704	ATU0144644	ATL8C25495:1..102	gap2	ATCEA4S12322	95							
152705	ATU0144645	ATL8C39401:227..750	gap2	ATCEA4C22571_1	95							
152706	ATU0144646	ATL8C19099:1232..1	gap2	ATCEA4C7660_1	95							
152707	ATU0144647	ATL8C4930:339..660	gap2	ATCEA4S31084	95							
152708	ATU0144648	ATL8C24943:741..1	gap2	ATCEA4C119155_1, ATCEA4S28003, ATCEA4C119155_2	95, 94, 92							
152709	ATU0144649	ATL8C19080:833..458	gap2	ATCEA4C52099_1	95							
152710	ATU0144650	ATL8C43622:212..92	gap2	ATCEA4C27922_1	95							
152711	ATU0144651	ATL8C3522:251..496	gap2	ATCEA4S2510	95							
152712	ATU0144652	ATL8C19014:446..271	gap2	ATCEA4C130938_1	95							
152713	ATU0144653	ATL8C9714:1..239	gap2	ATCEA4S2564	95							
152714	ATU0144654	ATL8C44917:1..107	gap2	ATCEA4C8376_1	95							
152715	ATU0144655	ATL8S6889:1.	gap2	ATCEA4S29075	95, 95, 91							

		.254		, ATCEA4 S28947 , ATCEA4 S29070								
152716	ATU014 656	ATL8C2 843:90 7..128 0	gap2	ATCEA4 S7	95							
152717	ATU014 657	ATL8C4 9213:7 70..63 8	gap2	ATCEA4 S8224	95							
152718	ATU014 658	ATL8C4 6761:1 ..252	gap2	ATCEA4 S36121 , ATCEA4 S19917	95, 93							
152719	ATU014 659	ATL8C2 6021:9 90..82 2	gap2	ATCEA4 C925_1	95							
152720	ATU014 660	ATL8C1 8365:3 72..1	gap2	ATCEA4 C950_1	95							
152721	ATU014 661	ATL8C1 69:213 ..1	gap2	ATCEA4 S36286 , ATCEA4 C909_1	95, 83							
152722	ATU014 662	ATL8C1 8944:1 ..201	gap2	ATCEA4 S344	95							
152723	ATU014 663	ATL8C3 1777:1 923..8 33	gap2	ATCEA4 S33754	94			g42205 24	100	350	2.1e-35	(AL035 356) putati ve protei n [Arabi dopsis thalia na]

152724	ATU014664	ATL8C39098:425..749	gap2	ATCEA4S30824, ATCEA4S35229	95, 85							
152725	ATU014665	ATL8C23058:553..1	gap2	ATCEA4C118594_1, ATCEA4C118594_2	95, 93							
152726	ATU014666	ATL8S30129:355..559	gap2	ATCEA4S2086	95							
152727	ATU014667	ATL8C49162:1..222	gap2	ATCEA4C46992_1	95							
152728	ATU014668	ATL8C10963:2491..2185	gap2	ATCEA4S31365	95							
152729	ATU014669	ATL8C45249:261..1	gap2	ATCEA4C18082_1	95							
152730	ATU014670	ATL8C46972:1366..1010	gap2	ATCEA4S178	95							
152731	ATU014671	ATL8C40405:758..818	gap2	ATCEA4C64837_1	95							
152732	ATU014672	ATL8C37105:229..1	gap2	ATCEA4S26471	95							
152733	ATU014673	ATL8C4318:1..701	gap2	ATCEA4C45481_1	95							
152734	ATU014674	ATL8C2446:841..592	gap2	ATCEA4C36717_1	95							
152735	ATU014675	ATL8C19706:1	gap2	ATCEA4C11639	95							

		638..1879		9_1								
152736	ATU014676	ATL8C17640:1..67	gap2	ATCEA4C114753_1	95							
152737	ATU014677	ATL8S29439:310..1	gap2	ATCEA4S36328	95							
152738	ATU014678	ATL8C4326:309..70	gap2	ATCEA4C66905_1	95							
152739	ATU014679	ATL8C9846:57..316	gap2	ATCEA4S30292	95							
152740	ATU014680	ATL8C18803:395..483	gap2	ATCEA4S14048	95							
152741	ATU014681	ATL8C21765:443..1011	gap2	ATCEA4C15746_1	95							
152742	ATU014682	ATL8C38017:1705..1411	gap2	ATCEA4S29485	95							
152743	ATU014683	ATL8S29325:1..163	gap2	ATCEA4S18304	95							
152744	ATU014684	ATL8C9846:668..259	gap2	ATCEA4C121144_1	95							
152745	ATU014685	ATL8C45874:1736..2388	gap2	ATCEA4C23888_1, ATCEA4S2483	95, 91							
152746	ATU014686	ATL8C42237:645..777	gap2	ATCEA4C6361_1	95							
152747	ATU014687	ATL8C30811:98..420	gap2	ATCEA4C24327_1	95							

152748	ATU0146688	ATL8C49075:211..706	gap2	ATCEA4S27264	95							
152749	ATU0146689	ATL8C36412:370..1	gap2	ATCEA4C114753_1	95							
152750	ATU0146690	ATL8C49052:1..408	gap2	ATCEA4C46319_1	95							
152751	ATU0146691	ATL8S25257:208..399	gap2	ATCEA4C16413_1	95							
152752	ATU0146692	ATL8C36112:875..1366	gap2	ATCEA4S3932	95							
152753	ATU0146693	ATL8C12471:2159..2091	gap2	ATCEA4C24963_1	95							
152754	ATU0146694	ATL8C31137:7119..7421	gap2	ATCEA4C49202_1, ATCEA4C49202_2	95, 94							
152755	ATU0146695	ATL8C39327:2499..2113	gap2	ATCEA4S13073	95							
152756	ATU0146696	ATL8C33707:1..99	gap2	ATCEA4C85573_1	95							
152757	ATU0146697	ATL8C18737:1120..844	gap2	ATCEA4S2689	95							
152758	ATU0146698	ATL8C6357:715..331	gap2	ATCEA4C35503_1	95							
152759	ATU0146699	ATL8C36118:5	gap2	ATCEA4S29549	95							

		14..845										
152760	ATU014700	ATL8C35065:854..505	gap2	ATCEA4S30598	95							
152761	ATU014701	ATL8C43327:2724..2305	gap2	ATCEA4S60	95							
152762	ATU014702	ATL8C29983:1..475	gap2	ATCEA4C66909_1, ATCEA4S29634	95, 92							
152763	ATU014703	ATL8C19616:78..428	gap2	ATCEA4C52907_1	95							
152764	ATU014704	ATL8S29237:1..537	gap2	ATCEA4C13162_1	95							
152765	ATU014705	ATL8C33811:1501..1220	gap2	ATCEA4C940_1	95							
152766	ATU014706	ATL8C4696:279..718	gap2	ATCEA4C91925_1	95							
152767	ATU014707	ATL8C13160:436..606	gap2	ATCEA4C22892_1	95							
152768	ATU014708	ATL8C46940:226..1	gap2	ATCEA4S29740	95							
152769	ATU014709	ATL8S10008:555..732	gap2	ATCEA4S30502	95							
152770	ATU014710	ATL8C36972:1297..1099	gap2	ATCEA4S714	95							
152771	ATU014	ATL8S2	gap2	ATCEA4	95							

	711	8893:556..364		C48070_1								
152772	ATU014712	ATL8C18509:1005..1159	gap2	ATCEA4S34846	95							
152773	ATU014713	ATL8S28836:1..272	gap2	ATCEA4C30185_1	95							
152774	ATU014714	ATL8C35013:3445..3935	gap2	ATCEA4S5623, ATCEA4S2395	95, 92							
152775	ATU014715	ATL8S28506:499..447	gap2	ATCEA4S35	95							
152776	ATU014716	ATL8C3240:615..940	gap2	ATCEA4S4388	95							
152777	ATU014717	ATL8C14072:6221..5683	gap2	ATCEA4S3941	95							
152778	ATU014718	ATL8C22308:419..600	gap2	ATCEA4S6179	95							
152779	ATU014719	ATL8C43441:1..118	gap2	ATCEA4S33938	95							
152780	ATU014720	ATL8C6640:245..41	gap2	ATCEA4C91940_1	95							
152781	ATU014721	ATL8C12015:1..1263	gap2	ATCEA4C23441_1	95							
152782	ATU014722	ATL8C12693:1..400	gap2	ATCEA4S25512	95							
152783	ATU014723	ATL8C43495:1182..2	gap2	ATCEA4C122830_1	95							

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152784	ATU0147 24	ATL8C18403:630..700	gap2	ATCEA4S32545	95							
152785	ATU0147 25	ATL8S1031:628..714	gap2	ATCEA4S17523	95							
152786	ATU0147 26	ATL8C46810:300..234	gap2	ATCEA4C22334_1	95							
152787	ATU0147 27	ATL8S25688:593..458	gap2	ATCEA4C151322_1	95							
152788	ATU0147 28	ATL8C21629:316..570	gap2	ATCEA4C33330_1	95							
152789	ATU0147 29	ATL8C38244:447..678	gap2	ATCEA4S12077	95							
152790	ATU0147 30	ATL8C1133:282..656	gap2	ATCEA4C953_1	95							
152791	ATU0147 31	ATL8S27842:359..1	gap2	ATCEA4S12643	95							
152792	ATU0147 32	ATL8C43555:698..44	gap2	ATCEA4S7567	95							
152793	ATU0147 33	ATL8C43653:116..723	gap2	ATCEA4C20611_1	95							
152794	ATU0147 34	ATL8C43685:917..437	gap2	ATCEA4C6206_1	95							
152795	ATU0147 35	ATL8C18361:256..62	gap2	ATCEA4C119655_1	95							

		4										
152796	ATU014736	ATL8C23768:1409..903	gap2	ATCEA4C5756_1	95							
152797	ATU014737	ATL8C436:2449..2002	gap2	ATCEA4S6127, ATCEA4S18983	95, 94							
152798	ATU014738	ATL8C25736:1233..1610	gap2	ATCEA4S25827	95							
152799	ATU014739	ATL8C28735:280..458	gap2	ATCEA4S3491	95							
152800	ATU014740	ATL8S10541:381..499	gap2	ATCEA4C11928_1	95							
152801	ATU014741	ATL8C25745:637..1454	gap2	ATCEA4C22971_1	95							
152802	ATU014742	ATL8C46119:541..40	gap2	ATCEA4C226_1	95							
152803	ATU014743	ATL8S10546:1..99	gap2	ATCEA4C30922_1	95							
152804	ATU014744	ATL8C23107:664..404	gap2	ATCEA4S34264	95							
152805	ATU014745	ATL8C25749:405..33	gap2	ATCEA4C151552_1	95							
152806	ATU014746	ATL8C20530:930..1197	gap2	ATCEA4S10471, ATCEA4S27485	95, 84							
152807	ATU014	ATL8C4	gap2	ATCEA4	95							

	747	5105:120..246		C20440_1								
152808	ATU014748	ATL8C31350:1230..1012	gap2	ATCEA4C22535_1	95							
152809	ATU014749	ATL8C30947:1..705	gap2	ATCEA4C387_1, ATCEA4S19981	95, 84							
152810	ATU014750	ATL8C19974:2876..2349	gap2	ATCEA4C916_1	95							
152811	ATU014751	ATL8C43107:869..580	gap2	ATCEA4C7425_1	95							
152812	ATU014752	ATL8C36895:774..298	gap2	ATCEA4C121027_1	95							
152813	ATU014753	ATL8S27771:210..1	gap2	ATCEA4S29364	95							
152814	ATU014754	ATL8S11989:1..389	gap2	ATCEA4C77053_1	95							
152815	ATU014755	ATL8C46916:534..1	gap2	ATCEA4C120953_1, ATCEA4S35191	95, 86							
152816	ATU014756	ATL8C8242:1..138	gap2	ATCEA4S19406, ATCEA4C30394_1	95, 94							
152817	ATU014757	ATL8C13036:213..10	gap2	ATCEA4C32903_1	95							

		02										
152818	ATU0147 58	ATL8C35007:1..254	gap2	ATCEA4S2163	95							
152819	ATU0147 59	ATL8C10352:586..279	gap2	ATCEA4C112703_1	95							
152820	ATU0147 60	ATL8C28778:870..484	gap2	ATCEA4C105493_1	95							
152821	ATU0147 61	ATL8C4898:2691..2259	gap2	ATCEA4S4352	95							
152822	ATU0147 62	ATL8C43877:1009..1354	gap2	ATCEA4S7	95							
152823	ATU0147 63	ATL8S11414:361..539	gap2	ATCEA4C17617_1	95							
152824	ATU0147 64	ATL8C17025:2307..1621	gap2	ATCEA4C1771_7, ATCEA4S33922	95, 87							
152825	ATU0147 65	ATL8C39679:723..483	gap2	ATCEA4S2857	95							
152826	ATU0147 66	ATL8C28798:760..839	gap2	ATCEA4S11278	95							
152827	ATU0147 67	ATL8C6607:1655..1600	gap2	ATCEA4S30635	95							
152828	ATU0147 68	ATL8C28800:369..1	gap2	ATCEA4C28736_1	95							

152829	ATU0147769	ATL8S27579:195..528	gap2	ATCEA4S11001	95							
152830	ATU0147770	ATL8C32331:1..1148	gap2	ATCEA4S12919	95							
152831	ATU0147771	ATL8C7413:1320..1533	gap2	ATCEA4C24313_1, ATCEA4S16640, ATCEA4S32081, ATCEA4S12503	95, 91, 88, 82							
152832	ATU0147772	ATL8C13218:73..1	gap2	ATCEA4S30505	95							
152833	ATU0147773	ATL8C3230:7478..7850	gap2	ATCEA4S344	95							
152834	ATU0147774	ATL8S30544:1..105	gap2	ATCEA4C45498_1, ATCEA4S18091	95, 82							
152835	ATU0147775	ATL8C18026:976..1330	gap2	ATCEA4S3596	95							
152836	ATU0147776	ATL8C40643:290..1	gap2	ATCEA4S4500	95							
152837	ATU0147777	ATL8C25885:559..139	gap2	ATCEA4C84875_1	95							
152838	ATU0147778	ATL8C4746:3304..35	gap2	ATCEA4C30551_1	95							

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152839	ATU014779	ATL8C28874:341..1	gap2	ATCEA4S12689	95							
152840	ATU014780	ATL8C36846:1450..744	gap2	ATCEA4C100425_1	95							
152841	ATU014781	ATL8C629:1077..730	gap2	ATCEA4C7212_1	95							
152842	ATU014782	ATL8C48904:1112..1280	gap2	ATCEA4C23890_1	95							
152843	ATU014783	ATL8C18002:2806..3435	gap2	ATCEA4C51983_1	95							
152844	ATU014784	ATL8C30293:271..684	gap2	ATCEA4C34466_1	95							
152845	ATU014785	ATL8C28149:671..827	gap2	ATCEA4C34983_1, ATCEA4S23501	95, 89							
152846	ATU014786	ATL8S11054:535..398	gap2	ATCEA4C28994_1	95							
152847	ATU014787	ATL8C19548:872..217	gap2	ATCEA4C50745_1, ATCEA4S6681	95, 94							
152848	ATU014788	ATL8S29450:1..106	gap2	ATCEA4C5015_1	95							
152849	ATU014789	ATL8C535:1386..1324	gap2	ATCEA4S2905	95							

152850	ATU014790	ATL8C25953:1..239	gap2	ATCEA4S1997	95							
152851	ATU014791	ATL8C4175:2359..1861	gap2	ATCEA4C119462_1	95							
152852	ATU014792	ATL8C48901:735..317	gap2	ATCEA4C8523_1	95							
152853	ATU014793	ATL8C17919:543..832	gap2	ATCEA4S27996	95							
152854	ATU014794	ATL8C45045:1144..2354	gap2	ATCEA4C71056_1, ATCEA4C21730_2, ATCEA4C71056_2	95, 93, 91							
152855	ATU014795	ATL8S27409:298..539	gap2	ATCEA4S33452	95							
152856	ATU014796	ATL8C27829:236..757	gap2	ATCEA4C107870_1	95							
152857	ATU014797	ATL8C13766:1714..1987	gap2	ATCEA4C4629_1, ATCEA4S11683	95, 92							
152858	ATU014798	ATL8C26043:168..547	gap2	ATCEA4C105476_1	95							
152859	ATU014799	ATL8C13023:2459..2	gap2	ATCEA4S11353	95							

		825										
152860	ATU014800	ATL8C28985:426..538	gap2	ATCEA4S4354	95							
152861	ATU014801	ATL8C18588:1..111	gap2	ATCEA4C518_1	95							
152862	ATU014802	ATL8S26919:597..316	gap2	ATCEA4C62898_1	95							
152863	ATU014803	ATL8C44017:804..538	gap2	ATCEA4S15121	95							
152864	ATU014804	ATL8C17815:1996..2081	gap2	ATCEA4S11810	95							
152865	ATU014805	ATL8C6278:473..103	gap2	ATCEA4S12748	95							
152866	ATU014806	ATL8C14793:7413..6773	gap2	ATCEA4C2970_1, ATCEA4C2970_3, ATCEA4S31674	95, 89, 82							
152867	ATU014807	ATL8C10206:1..167	gap2	ATCEA4S30655	95							
152868	ATU014808	ATL8S22628:282..97	gap2	ATCEA4C2381_2, ATCEA4C2381_1	95, 94							
152869	ATU014809	ATL8C14121:866..1149	gap2	ATCEA4S13233	95							

152870	ATU0148 10	ATL8C39787:606..80	gap2	ATCEA4C86529_1	95							
152871	ATU0148 11	ATL8S8024:240..367	gap2	ATCEA4S17793, ATCEA4C1897_1	95, 94							
152872	ATU0148 12	ATL8C33117:103..1	gap2	ATCEA4S31060	95							
152873	ATU0148 13	ATL8S21084:1..82	gap2	ATCEA4C107135_1, ATCEA4S32771, ATCEA4S35189	95, 95, 92							
152874	ATU0148 14	ATL8C29010:1025..813	gap2	ATCEA4S661	95							
152875	ATU0148 15	ATL8C34760:615..1	gap2	ATCEA4C13843_2, ATCEA4C13843_1, ATCEA4S25888	95, 95, 93							
152876	ATU0148 16	ATL8S27276:403..256	gap2	ATCEA4S33119	95							
152877	ATU0148 17	ATL8C43741:415..313	gap2	ATCEA4C553_1	95							
152878	ATU0148 18	ATL8C47544:1119..104	gap2	ATCEA4C458_1	95							

152879	ATU014819	ATL8S26559:247..466	gap2	ATCEA4C18173_1	95							
152880	ATU014820	ATL8C17616:1056..1512	gap2	ATCEA4S11442	95							
152881	ATU014821	ATL8C23219:390..574	gap2	ATCEA4C11710_1	95							
152882	ATU014822	ATL8S26246:75..508	gap2	ATCEA4C117580 1	95							
152883	ATU014823	ATL8C3668:55..330	gap2	ATCEA4S1012	95							
152884	ATU014824	ATL8S11591:1..158	gap2	ATCEA4S26682	95							
152885	ATU014825	ATL8C14600:82..219	gap2	ATCEA4S897	95							
152886	ATU014826	ATL8C2615:1650..2031	gap2	ATCEA4C27331_1	95							
152887	ATU014827	ATL8S809:545..230	gap2	ATCEA4S6048	95							
152888	ATU014828	ATL8C17555:1..312	gap2	ATCEA4C88593 1	95							
152889	ATU014829	ATL8C49061:1..193	gap2	ATCEA4C80750 1	95							
152890	ATU014830	ATL8C10173:690..267	gap2	ATCEA4S32867	95							
152891	ATU014831	ATL8C17478:1158..6	gap2	ATCEA4S30210	95							

		92										
152892	ATU0148 32	ATL8C17460:459..590	gap2	ATCEA4S30605	95							
152893	ATU0148 33	ATL8C48749:560..1267	gap2	ATCEA4S4753	95							
152894	ATU0148 34	ATL8S11728:64..371	gap2	ATCEA4S26395	95							
152895	ATU0148 35	ATL8C6523:107..1	gap2	ATCEA4S3673	95							
152896	ATU0148 36	ATL8C27024:16..449	gap2	ATCEA4S713	94	ATL8C27024:129..449	0.95	g3785970	99	487	1.1e-26	(AC005560) hypothetical protein [Arabidopsis thaliana]
152897	ATU0148 37	ATL8C23915:60..4384	gap2	ATCEA4C64911_1, ATCEA4C69646_1	94, 83	ATL8C23915:80..4384	0.87	g3980414	99	538	1.1e-33	(AC004561) unknown protein [Arabidopsis thaliana]
152898	ATU0148 38	ATL8C14403:3874..1	gap2	ATCEA4C20344_1	94	ATL8C14403:3874..355	0.84	g2983032, g1498340	99, 61	144, 141	5.8e-09, 3.3e-05	(AE000685) peptidyl-tRNA hydrolase [Aquifex

												aeolicus]; (U60503) actin [Glycine max]
152899	ATU014839	ATL8C14516:173..1014	gap2	ATCEA4S30169, ATCEA4C53412_1	94, 84	ATL8C14516:346..678	0.83	g133728	99	439	6.7e-22	CHLOROPLAST 30S RIBOSOMAL PROTEIN S11 [Spinacia oleracea]
152900	ATU014840	ATL8C36956:1055..135	gap2	ATCEA4C13749_1	94	ATL8C36956:1016..135	0.75	g4455362	99	387	8.2e-35	(AL035524) putative protein [Arabidopsis thaliana]
152901	ATU014841	ATL8C20275:755..1764	gap2	ATCEA4S34375, ATCEA4S2549	94, 83	ATL8C20275:864..1764	0.72	g3738283	99	405	9.4e-25	(AC005309) unknown protein [Arabidopsis thaliana]
152902	ATU014842	ATL8C33353:1..2013	gap2	ATCEA4S756, ATCEA4S7225, ATCEA4S28614	94, 90, 86	ATL8C33353:204..2004	0.72	g3399769, g1906000	99, 72	196, 647	1.0e-16, 2.4e-23	(U76299) uclacyanin II [Arabi

												dopsis thaliana]; (U90428) blue copper-binding protein II [Arabidopsis thaliana]
152903	ATU014843	ATL8C27748:2176..1	gap2	ATCEA4C1681_2	94	ATL8C27748:2176..338	0.72	g3421104	99	1022		(AF043531) 20S proteasome beta subunit PBB2 [Arabidopsis thaliana]
152904	ATU014844	ATL8C1629:525..1025	gap2	ATCEA4S34576, ATCEA4S7972	94, 90	ATL8C1629:531..1025	0.69	g3047107	99	601	4.6e-59	(AF058919) Similar to actin binding protein; F6N23.12 [Arabidopsis thaliana]
152905	ATU014845	ATL8C2028:21	gap2	ATCEA4S33713	94, 89	ATL8C2028:19	0.64	g2388999	99	66	0.0048	(Z98981)

		37..204		, ATCEA4S34606		81..364						hypothetical protein [Schizosaccharomyces pombe]
152906	ATU014846	ATL8C41805:5747..2660	gap2	ATCEA4S35300, ATCEA4S36305	94, 91	ATL8C41805:5660..2660	0.62	g4587618, g3242713	99, 77	258, 2329	9.8e-16, 1.5e-240	(AC006951) hypothetical protein [Arabidopsis thaliana]; (AC003040) putative transposase [Arabidopsis thaliana]
152907	ATU014847	ATL8C11094:996..1	gap2	ATCEA4C4942_1, ATCEA4C4942_2, ATCEA4S6967, ATCEA4S13603, ATCEA4S29132, ATCEA4C4942_	94, 92, 89, 89, 85, 84	ATL8C11094:612..178	0.60	g3157925	99	180	0.25	(AC002131) ESTs gb|F13979, gb|AA042648, gb|H77240, gb|T76189, gb|H35952, gb|T22022 and

				3								gb|T42279 come from this gene. A similar ORF is present on the opposite strand. [Arabidopsis thaliana]
152908	ATU014848	ATL8C3146:6455..1	gap2	ATCEA4C251_4, ATCEA4S253, ATCEA4S178	94, 86, 83	ATL8C3146:6455..91	0.57	g4662646, g4874309	99, 51	560, 416	2.3e-37, 8.8e-38	(AC006429) hypothetical protein [Arabidopsis thaliana]; (AC006053) biotin holocarboxylase synthetase [Arabidopsis thaliana]
152909	ATU014849	ATL8C27576:1	gap2	ATCEA4C30449	94, 93	ATL8C27576:1	0.48	g3885513	99	350		(AF084201)

		..3748		_2, ATCEA4 C30449 _1		24..37 48						similar to chloro plast 50S riboso mal protei n L31 [Medic ago sativa]
152910	ATU014 850	ATL8C2 1111:1 542..1 2	gap2	ATCEA4 S31328 , ATCEA4 S35034	94, 93	ATL8C2 1111:1 542..5 38	0.48	g45875 67	99	219	1.5e-13	(AC006 550) F10O3. 7 [Arabi dopsis thalia na]
152911	ATU014 851	ATL8C2 8:1883 ..135	gap2	ATCEA4 S178, ATCEA4 S253	94, 88	ATL8C2 8:1883 ..135	0.45	g45586 84	99	359	8.4e-13	(AC006 586) hypoth etical protei n [Arabi dopsis thalia na]
152912	ATU014 852	ATL8C2 4113:8 33..20 47	gap2	ATCEA4 C71559 _2, ATCEA4 C71559 _1	94, 93			g36872 45	99	569	1.0e-55	(AC005 169) putati ve riboso mal protei n [Arabi dopsis thalia na]
152913	ATU014 853	ATL8C3 2227:7	gap2	ATCEA4 S29378	94, 84,			g21453 60	99	504	4.8e-30	(Y0889 2)

		08..155		, ATCEA4C279_3, ATCEA4C279_9, ATCEA4S27541	83, 83							Hsc70-G8 protein [Arabidopsis thaliana]
152914	ATU014854	ATL8C22586:539..1536	gap2	ATCEA4C88925_1	94			g2194133	99	434	2.9e-35	(AC002062) No definition line found [Arabidopsis thaliana]
152915	ATU014855	ATL8C2020:1208..439	gap2	ATCEA4C120922_1, ATCEA4C120922_2, ATCEA4S1256	94, 94, 83			g3269297	99	184	4.8e-17	(AL030978) putative protein [Arabidopsis thaliana]
152916	ATU014856	ATL8C14386:693..1341	gap2	ATCEA4C38647_1	94			g82237	99	210	3.8e-17	hypothetical protein 99A - common tobacco chloroplast [Nicotiana tabacum]
152917	ATU014	ATL8C1	gap2	ATCEA4	94,			g45103	99	584	3.2e-	(AC006

	857	2156:52..998		C6123_1, ATCEA4S34307, ATCEA4S34646, ATCEA4C6123_3	93, 89, 88			45			41	921) unknown protein [Arabidopsis thaliana]
152918	ATU014858	ATL8C47697:720..1	gap2	ATCEA4C103065_1	94			g2370459	99	451	8.4e-44	(Y11987) FPF1 protein [Sinapis alba]
152919	ATU014859	ATL8C45672:741..1279	gap2	ATCEA4C30280_2, ATCEA4C30280_1	94, 87			g730583	99	276	7.4e-15	60S ACIDIC RIBOSOMAL PROTEIN P2 [Parthenium argentatum]
152920	ATU014860	ATL8C34100:724..1	gap2	ATCEA4C69743_1, ATCEA4S31162	94, 93			g4586262	99	149	1.4e-14	(AL049640) putative calmodulin [Arabidopsis thaliana]
152921	ATU014861	ATL8C2879:1976..2968	gap2	ATCEA4S26386	94			g4417269	99	163	1.4e-16	(AC007019) hypothetical protein

												[Arabidopsis thaliana]
152922	ATU014862	ATL8C49075:1315..253	gap2	ATCEA4C122791_1, ATCEA4S33421	94, 88			g4651204	99	149	7.4e-13	(AB026262) ring finger protein [Cicer arietinum]
152923	ATU014863	ATL8C839:8382..4367	gap2	ATCEA4C66696_1	94	ATL8C839:8327..7052	0.64	g2160138	98	2713	3.3e-245	(AC000375) No definition line found [Arabidopsis thaliana]
152924	ATU014864	ATL8C24279:287..602	gap2	ATCEA4S34144	94			g4314361	98	287	4.7e-24	(AC006340) unknown protein [Arabidopsis thaliana]
152925	ATU014865	ATL8C8164:1902..606	gap2	ATCEA4C16351_1, ATCEA4S6367	94, 85	ATL8C8164:1674..606	0.85	g4262185	97	760	3.2e-72	(AC005508) 64038 [Arabidopsis thaliana]
152926	ATU014866	ATL8C10968:4413..4	gap2	ATCEA4C50402_1	94			g3860276	97	162	1.6e-09	(AC005824) unknow

		562										n protein [Arabidopsis thaliana]
152927	ATU014867	ATL8C19795:234..5269	gap2	ATCEA4C119357_1, ATCEA4S29085	94, 94	ATL8C19795:313..4136	0.83	g2982452	96	1818	2.8e-165	(AL022223) receptor protein kinase-like protein [Arabidopsis thaliana]
152928	ATU014868	ATL8C25736:2328..1284	gap2	ATCEA4C15133_1	94	ATL8C25736:2244..1347	0.55	g1085002	95	453	1.1e-37	mitochondrial carrier protein DIF-1 homolog - Caenorhabditis elegans [Caenorhabditis elegans]
152929	ATU014869	ATL8C42774:938..1	gap2	ATCEA4S12651, ATCEA4	94, 89, 85	ATL8C42774:852..11	0.79	g4314396	94	1017	1.9e-88	(AC006232) putative

				S31074, ATCEA4S36024								flavonol sulfotransferase [Arabidopsis thaliana]
152930	ATU014870	ATL8C11688:1..1861	gap2	ATCEA4C16516_1, ATCEA4S25064	94, 82	ATL8C11688:209..1729	0.76	g2342674	94	1175	5.0e-96	(AC000106) Similar to ATP-dependent Clp protease (gb|D90915). EST gb|N65461 comes from this gene. [Arabidopsis thaliana]
152931	ATU014871	ATL8C9340:337..2510	gap2	ATCEA4S15837	94	ATL8C9340:337..2432	0.96	g2894572	93	2114	1.7e-189	(AL021890) calcium-dependent protein kinase - like protein [Arabi

												dopsis thaliana]
152932	ATU014872	ATL8C48338:883..1943	gap2	ATCEA4S8132, ATCEA4C5058_1	94, 92			g2829922	93	1707	0.055	(AC002291) extensin [Arabidopsis thaliana]
152933	ATU014873	ATL8C30753:3879..2094	gap2	ATCEA4S12609, ATCEA4S721	94, 92	ATL8C30753:3879..2102	0.98	g4558665	92	1159	4.1e-70	(AC007063) putative white protein [Arabidopsis thaliana]
152934	ATU014874	ATL8C6822:3024..866	gap2	ATCEA4S36367, ATCEA4C1847_1	94, 89	ATL8C6822:2893..866	0.80	g3582330	92	1767	3.5e-185	(AC005496) hypothetical protein [Arabidopsis thaliana]
152935	ATU014875	ATL8C17954:646..2300	gap2	ATCEA4S3216	94	ATL8C17954:860..2271	0.65	g3935174, g4056425	92, 46	129, 87		(AC004557) F17L21.17 [Arabidopsis thaliana]; (AC005322) ESTs gb|H36249,

												gb|AA59732 and gb|AA651219 come from this gene. [Arabidopsis thaliana]
152936	ATU014876	ATL8C33195:6123..4931	gap2	ATCEA4S2526	94			g4432840	92	235	5.7e-18	(AC006283) unknown protein [Arabidopsis thaliana]
152937	ATU014877	ATL8C1150:1..1381	gap2	ATCEA4C56986_1	94			g4895260	92	336	1.0e-21	(AC007658) thioredoxin-like protein [Arabidopsis thaliana]
152938	ATU014878	ATL8C7170:1..967	gap2	ATCEA4S542	94			g4056493	92	523	4.3e-51	(AC005896) unknown protein [Arabidopsis thaliana]
152939	ATU014	ATL8C2	gap2	ATCEA4	94,			g22136	92	156	2.7e-	(AC000

	879	0400:1132..1		C4807_4, ATCEA4C4807_1, ATCEA4S30124, ATCEA4S6268	91, 83, 82			19			16	103) F21J9.14 [Arabidopsis thaliana]
152940	ATU014880	ATL8C19347:76..1329	gap2	ATCEA4C123177_1	94	ATL8C19347:76..1329	0.65	g2723477	90	702	5.1e-55	(D89824) GTP-binding protein [Arabidopsis thaliana]
152941	ATU014881	ATL8C6762:490..1635	gap2	ATCEA4S2121	94	ATL8C6762:490..1635	0.55	g3913418	90	429	7.6e-49	S-ADENOSYLMETHIONINE DECARBOXYLASE PROENZYME (ADOMETDC) (SAMDC) [Arabidopsis thaliana]
152942	ATU014882	ATL8C24031:1170..313	gap2	ATCEA4S33943	94	ATL8C24031:954..322	0.41	g3885438	90	657	1.5e-67	(AF039211) ADP/ATP translocase [Dicty

												osteli um discoi deum]
152943	ATU014 883	ATL8C4 8533:1 ..2611	gap2	ATCEA4 S2341	94	ATL8C4 8533:5 4..261 1	0.67	g46782 69	89	846	2.1e-69	(AL049 660) putati ve protei n [Arabi dopsis thalia na]
152944	ATU014 884	ATL8C3 466:1. .1147	gap2	ATCEA4 S29633	94	ATL8C3 466:12 7..114 7	0.66	g22450 87	89	1090	2.4e-103	(Z9734 3) hypoth etical protei n [Arabi dopsis thalia na]
152945	ATU014 885	ATL8S5 230:66 8..2	gap2	ATCEA4 S36312	94	ATL8S5 230:41 7..62	0.59	g62951 9	89	575	3.2e-42	glucos e-1-phosph ate adenyl yltran sferas e (EC 2.7.7. 27) large chain 2 - Arabid opsis thalia na (fragm ent) []
152946	ATU014	ATL8C1	gap2	ATCEA4	94	ATL8C1	0.76	g45444	88	3217	1.2e-	(AC006

	886	4075:1..3205		C31864_1		4075:538..3205		51			301	592) unknown protein [Arabidopsis thaliana]
152947	ATU014887	ATL8C42709:20..842	gap2	ATCEA4C623_1, ATCEA4S16322	94, 82	ATL8C42709:83..273	0.74	g3122263	88	791	6.1e-73	EUKARYOTIC TRANSLATION INITIATION FACTOR 4E (EIF-4E) (EIF4E) (MRNA CAP-BINDING PROTEIN) (EIF-(ISO)4F 25 KD SUBUNIT) (EIF-(ISO)4F P28 SUBUNIT) [Arabidopsis thaliana]
152948	ATU014888	ATL8C9931:1..5075	gap2	ATCEA4S27393	94	ATL8C9931:247..188	0.50, 0.42	g4432807, g42630	88, 80	4420, 271	0.0, 4.1e-25	(AC006570) putati

						0, ATL8C9931:2118..5075		62				ve polyprotein [Arabidopsis thaliana]; (AC005142) hypothetical protein [Arabidopsis thaliana]
152949	ATU014889	ATL8C42686:642..1	gap2	ATCEA4C2251_1	94	ATL8C42686:642..347	0.81	g4455194	87	114	1.4e-07	(AL035440) putative protein [Arabidopsis thaliana]
152950	ATU014890	ATL8C37776:1..2262	gap2	ATCEA4S32105, ATCEA4S32138	94, 94	ATL8C37776:232..2178	0.64	g4539404	87	2527	4.8e-266	(AL049524) putative protein [Arabidopsis thaliana]
152951	ATU014891	ATL8C18025:238..8116	gap2	ATCEA4S126, ATCEA4S179, ATCEA4S11406	94, 90, 84	ATL8C18025:6437..8018, ATL8C18025:238..6280	0.55, 0.43	g4388825, g4773910	87, 36	1931, 171	5.4e-138, 4.0e-09	(AC006528) putative pol polyprotein with revers

												e transcriptase domain (Pfam: PF00078) [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
152952	ATU014892	ATL8C31854:1235..250	gap2	ATCEA4S27108	94	ATL8C31854:1087..266	1.00	g3399765	86	585	4.9e-50	(U68561) heat shock transcription factor 21 [Arabidopsis thaliana]
152953	ATU014893	ATL8S26400:528..140	gap2	ATCEA4C117081_1	94	ATL8S26400:460..301	0.92	g3080373	86	339		(AL022580) putative protein [Arabidopsis thalia

												na]
152954	ATU014894	ATL8C94:1274..249	gap2	ATCEA4C5370_1	94	ATL8C94:1142..249	0.86	g2894607	86	639	1.8e-63	(AL021889) NAM (no apical meristem) - like protein [Arabidopsis thaliana]
152955	ATU014895	ATL8C36446:786..1	gap2	ATCEA4C144641_1, ATCEA4S9622	94, 88	ATL8C36446:720..110	0.95	g3980386	85	905	5.8e-92	(AC004561) putative glutathione S-transferase [Arabidopsis thaliana]
152956	ATU014896	ATL8C15100:61..666	gap2	ATCEA4C69078_1	94	ATL8C15100:62..593	0.69	g1663551	84	216	1.5e-12	(U55810) disease resistance protein homolog [Glycine max]
152957	ATU014897	ATL8C37114:1598..208	gap2	ATCEA4S35679, ATCEA4	94, 88	ATL8C37114:1447..455	0.52	g2494304	84	410		TRANSLATION INITIATION

				S33048								FACTOR EIF-2B ALPHA SUBUNIT (EIF-2B GDP-GTP EXCHANGE FACTOR) [Rattus norvegicus]
152958	ATU014898	ATL8C13415:2843..1	gap2	ATCEA4C132646_1, ATCEA4S29968	94, 88	ATL8C13415:2605..95	0.75	g3335336	83	2090	8.6e-181	(AC004512) Contains similarity to DnaJ gene YM8520.10 gb|825566 from from S. cerevisiae cosmid gb|Z49705. ESTs gb|Z47720 and gb|Z29879 come

												from this gene. [Arabidopsis thaliana]
152959	ATU014899	ATL8C25136:1505..1	gap2	ATCEA4C15914_1, ATCEA4S24596, ATCEA4S24597	94, 87, 85			g3283893	83	400	5.7e-38	(AF070626) unknown [Homo sapiens]
152960	ATU014900	ATL8C36601:4538..1374	gap2	ATCEA4S7133, ATCEA4S30190	94, 93	ATL8C36601:4538..1374	0.94	g2149640	82	1209	1.7e-106	(U91995) Argonaute protein [Arabidopsis thaliana]
152961	ATU014901	ATL8C33217:1371..2014	gap2	ATCEA4C29175_1	94	ATL8C33217:1449..1839	0.81	g3608142	82	585	2.9e-35	(AC005314) putative hin1 [Arabidopsis thaliana]
152962	ATU014902	ATL8C14762:5171..6507	gap2	ATCEA4S36378	94	ATL8C14762:5171..5970	0.76	g2500191	82	590	3.2e-45	RAC-LIKE GTP BINDING PROTEIN ARAC2 [Arabidopsis thalia

												na]
152963	ATU014903	ATL8C34610:880..1	gap2	ATCEA4S6148	94			g1942055	82	1327	1.2e-129	Structure Of Nadph Dependent Thioredoxin Reductase []
152964	ATU014904	ATL8C17005:444..1	gap2	ATCEA4C2352_1, ATCEA4S4127, ATCEA4S12877	94, 91, 82	ATL8C17005:404..284	0.99	g1817546	81	263	3.4e-24	(D83997) mabinlin [Cappa rismasaikai]
152965	ATU014905	ATL8C39168:1..2503	gap2	ATCEA4C18323_1, ATCEA4C18323_4, ATCEA4C5222_1, ATCEA4S1843, ATCEA4S7944, ATCEA4C89243_1	94, 90, 85, 83, 82, 82	ATL8C39168:119..2503	0.77	g4758668	81	764	1.8e-62	serine palmitoyltransferase, subunit II [Homo sapiens]
152966	ATU014906	ATL8C17197:735..1	gap2	ATCEA4C708_1, ATCEA4C708_2, ATCEA4S8710	94, 91, 82	ATL8C17197:518..62	0.41	g2281094	81	716	1.5e-69	(AC002333) molybdenum cofactor biosynthesis protein E isolog

												[Arabidopsis thaliana]
152967	ATU014907	ATL8C50007:1..1195	gap2	ATCEA4C9490_1, ATCEA4S13048, ATCEA4C256341	94, 87, 82	ATL8C50007:167..1142	0.81	g3776084	80	191	2.5e-17	(Y18251) NtN2 [Medicago truncatula]
152968	ATU014908	ATL8C790:1..2460	gap2	ATCEA4C28004_1, ATCEA4C28004_2	94, 89	ATL8C790:147..1423	0.71	g3461835	79	452	2.2e-42	(AC005315) putative protein kinase [Arabidopsis thaliana]
152969	ATU014909	ATL8C23476:1658..2870	gap2	ATCEA4C819_1	94	ATL8C23476:1718..2351	0.74	g1169200	78	1174	3.1e-70	DNA-DAMAGE-REPAIR/TOLERATION PROTEIN DRT111 PRECURSOR [Arabidopsis thaliana]
152970	ATU014910	ATL8C5855:1..2051	gap2	ATCEA4C101600_1, ATCEA4S25200	94, 89	ATL8C5855:176..1051	0.66	g556409	78	219		(L34551) transcriptional activa

												tor protein [Oryza sativa]
152971	ATU014911	ATL8C16782:1..2617	gap2	ATCEA4S29552, ATCEA4S30795, ATCEA4S1645	94, 93, 91	ATL8C16782:617..2502	0.63	g1885381	78	178	2.1e-14	(U77665) RNaseP protein P30 [Homo sapiens]
152972	ATU014912	ATL8C16312:911..1	gap2	ATCEA4C51855_1	94	ATL8C16312:749..93	0.71	g3056589	77	556	6.1e-63	(AC004255) T1F9.10 [Arabidopsis thaliana]
152973	ATU014913	ATL8C19753:946..1970	gap2	ATCEA4S31279, ATCEA4C119334_1	94, 93	ATL8C19753:1024..1850	0.62	g1724112	77	143	4.0e-07	(U80037) ABA induced plasma membrane protein PM 19 [Triticum aestivum]
152974	ATU014914	ATL8C33549:3242..683	gap2	ATCEA4C27186_1, ATCEA4C120125_1, ATCEA4C67588_1	94, 92, 88	ATL8C33549:3143..868	0.98	g1082798	76	651	2.8e-33	splicesome-associated protein SAP 61 - human [Homo

												sapiens]
152975	ATU014915	ATL8C20798:1..1526	gap2	ATCEA4S10496, ATCEA4S23845	94, 92	ATL8C20798:128..1413	0.79	g4803931	76	1004	1.1e-69	(AC006264) unknown protein [Arabidopsis thaliana]
152976	ATU014916	ATL8C17383:7098..538	gap2	ATCEA4S12515, ATCEA4C6445_2, ATCEA4C6445_1	94, 86, 83	ATL8C17383:7098..538	0.65	g2911055, g529707	76, 71	594, 302	9.0e-48, 9.3e-20	(AL021961) putative protein [Arabidopsis thaliana]; (U13070) No definition line found [Caenorhabditis elegans]
152977	ATU014917	ATL8C10361:1478..322	gap2	ATCEA4C72404_1, ATCEA4S13516	94, 93			g4150963	76	370		(Y18620) DsPTP1 protein [Arabidopsis thaliana]
152978	ATU014918	ATL8C45046:2557..1	gap2	ATCEA4S7	94	ATL8C45046:2419..1	0.83	g1724112	75	96	0.023	(U80037) ABA induce

		006				792						d plasma membrane protein PM 19 [Triticum aestivum]
152979	ATU014919	ATL8C20713:1..3281	gap2	ATCEA4S2882, ATCEA4S34740, ATCEA4C66121_1, ATCEA4S5118	94, 91, 86, 85	ATL8C20713:70..3281	0.82	g577301	75	471	1.6e-40	(D42044) Theha3523 gene product is related to S.cerevisiae gene product located in chromosome III. [Homo sapiens]
152980	ATU014920	ATL8C7541:678..1	gap2	ATCEA4C150889_1, ATCEA4S10407	94, 86	ATL8C7541:532..82	0.76	g3894186	75	923	1.5e-93	(AC005662) putative embryo-abundant protein [Arabidopsis thalia

												na]
152981	ATU014921	ATL8C12258:82..2652	gap2	ATCEA4C15906_1	94	ATL8C12258:82..2586	0.74	g2116759	75	492	7.5e-28	(D86418) YfnA [Bacillus subtilis]
152982	ATU014922	ATL8C34038:1335..1	gap2	ATCEA4C689_1, ATCEA4S17809	94, 92	ATL8C34038:1151..335	0.71	g3776029	75	766	1.5e-60	(AJ010476) RNA helicase [Arabidopsis thaliana]
152983	ATU014923	ATL8C45033:1366..1	gap2	ATCEA4C16226_1	94	ATL8C45033:1098..53	0.71	g2842484	75	638	3.8e-69	(AL021749) tyrosine transaminase-like protein [Arabidopsis thaliana]
152984	ATU014924	ATL8C2271:1..753	gap2	ATCEA4C5842_2	94			g4914378	75	892	4.1e-88	(AC007584) hypothetical protein [Arabidopsis thaliana]
152985	ATU014925	ATL8C2723:1896..1	gap2	ATCEA4S1006	94	ATL8C2723:1896..43	0.81	g4263063	73	2027	2.0e-185	(AC005142) hypothetical

												protein [Arabidopsis thaliana]
152986	ATU014926	ATL8C15944:1..1151	gap2	ATCEA4C116470_1	94			g2739010	73	1388	1.8e-142	(AF022464) CYP77A3p [Glycine max]
152987	ATU014927	ATL8C17542:2030..17	gap2	ATCEA4C11470_2, ATCEA4C11470_1, ATCEA4C61754_1, ATCEA4S10134	94, 93, 92, 85	ATL8C17542:1961..139	0.88	g3822036	72	120	3.6e-11	(AF072326) endo-1,3-1,4-beta-D-glucanase [Zea mays]
152988	ATU014928	ATL8C13208:1..1634	gap2	ATCEA4S7245, ATCEA4C20244_1	94, 82	ATL8C13208:205..1514	0.84	g3668086	71	331	2.3e-26	(AC004667) unknown protein [Arabidopsis thaliana]
152989	ATU014929	ATL8C27993:1..814	gap2	ATCEA4C122328_1	94			g4589123	71	619		(AF126374) At14a protein [Arabidopsis thaliana]
152990	ATU014	ATL8C2	gap2	ATCEA4	94			g26187	71	401	1.3e-	(AC002

	930	4778:1..991		S4937				01			39	510) hypothetical protein [Arabidopsis thaliana]
152991	ATU014931	ATL8C10668:1..631	gap2	ATCEA4S32989	94			g112785	71	212		DNA-3-METHYLADENINE GLYCOSIDASE I (3-METHYLADENINE-DNA GLYCOSYLASE I, CONSTITUTIVE) (TAG I) [Escherichia coli]
152992	ATU014932	ATL8C33805:1168..1	gap2	ATCEA4S33326, ATCEA4C5454_1	94, 89	ATL8C33805:973..9	0.90	g3551523, g3201627	70, 33	149, 61	2.2e-15, 1.6e-06	(AB017026) oxysterol-binding protein [Mus musculus]; (AC004669) putative SWH1

												protein [Arabidopsis thaliana]
152993	ATU014933	ATL8C2976:3103..1	gap2	ATCEA4S29954	94	ATL8C2976:3103..61	0.85	g3088575	70	334	2.6e-24	(AF059531) protein arginine N-methyltransferase 3 [Homo sapiens]
152994	ATU014934	ATL8C38255:1391..1	gap2	ATCEA4S1927, ATCEA4C8319_3, ATCEA4S3605, ATCEA4S15924, ATCEA4C8319_1	94, 94, 93, 92, 88	ATL8C38255:950..179	0.73	g3063450	70	858	1.4e-83	(AC003981) F22O13.12 [Arabidopsis thaliana]
152995	ATU014935	ATL8C38908:791..1	gap2	ATCEA4C28124_1, ATCEA4C120510_1	94, 89	ATL8C38908:601..212	0.69	g3292817	70	314	7.6e-36	(AL031018) hypothetical protein [Arabidopsis thaliana]
152996	ATU014936	ATL8C10680:628..1	gap2	ATCEA4S12510,	94, 90	ATL8C10680:543..71	0.42	g4741186	70	137		(AL049746) putati

				ATCEA4C25503_1								ve protein [Arabidopsis thaliana]
152997	ATU014937	ATL8C35074:626..1	gap2	ATCEA4S3245	94	ATL8C35074:626..78	0.81	g3834330	69	373	0.0021	(AC005679) F9K20.17 [Arabidopsis thaliana]
152998	ATU014938	ATL8C36517:3800..1	gap2	ATCEA4C77053_1, ATCEA4S31693	94, 92	ATL8C36517:3681..291	0.86	g3287695	68	1056	3.1e-100	(AC003979) Similar to hypothetical protein C34B7.2 gb|1729503 from C. elegans cosmid gb|Z83220. [Arabidopsis thaliana]
152999	ATU014939	ATL8C23027:1..1090	gap2	ATCEA4C5195_1	94	ATL8C23027:66..716	0.53	g2244993	68	797	4.9e-82	(Z97341) similarity to AMP-activa

												ted protein kinase beta [Arabidopsis thaliana]
153000	ATU014940	ATL8C32245:3426..1	gap2	ATCEA4S32243, ATCEA4S10322, ATCEA4C44644_1	94, 93, 82	ATL8C32245:3354..408	0.41	g3877951	68	176	1.3e-16	(Z81555) predicted using Genefinder [Caenorhabditis elegans]
153001	ATU014941	ATL8C46434:1..1602	gap2	ATCEA4S32797, ATCEA4S31141	94, 92			g2462822	68	466	3.7e-37	(AF000657) hypothetical protein [Arabidopsis thaliana]
153002	ATU014942	ATL8C23739:1..1354	gap2	ATCEA4C51284_1, ATCEA4C27931_1	94, 90			g3928543	68	1278	3.5e-127	(AB016819) UDP-glucose glucosyltransferase [Arabidopsis thaliana]
153003	ATU014	ATL8S8	gap2	ATCEA4	94, 94	ATL8S8	0.96	g13175	67	391	2.5e-	PPLZ12

	943	416:1..587		C23549_2, ATCEA4S35998		416:32..442		5			39	PROTEIN [Lupinus polyphyllus]
153004	ATU014944	ATL8C35033:151..1511	gap2	ATCEA4C33973_1	94	ATL8C35033:578..1508	0.82	g4538911	67	996	2.6e-82	(AL049482) hypothetical protein [Arabidopsis thaliana]
153005	ATU014945	ATL8C10746:1569..1	gap2	ATCEA4S30785	94	ATL8C10746:1519..37	0.58	g3075398	67	726	9.3e-64	(AC004484) unknown protein [Arabidopsis thaliana]
153006	ATU014946	ATL8C5974:1..4808	gap2	ATCEA4C122089_1, ATCEA4C44945_1	94, 93	ATL8C5974:2663..4808	0.42	g2832625	67	635		(AL021711) putative protein [Arabidopsis thaliana]
153007	ATU014947	ATL8C24098:3462..1971	gap2	ATCEA4C67342_1, ATCEA4S33701	94, 93			g2769566	67	437	8.5e-32	(Y10477) chloroplast thylakoidal processing peptid

												ase [Arabidopsis thaliana]
153008	ATU014948	ATL8C17505:824..225	gap2	ATCEA4C13416_1	94	ATL8C17505:761..225	0.95	g1888557	66	267	4.5e-17	(U89841) diadenosine 5',5'''-P1,P4-tetraphosphate hydrolase [Lupinus angustifolius]
153009	ATU014949	ATL8C25363:879..1	gap2	ATCEA4C83668_1	94	ATL8C25363:766..12	0.92	g2833460	66	76	8.0e-06	RIBOFLAVIN-SPECIFIC DEAMINASE [Synechocystis sp.]
153010	ATU014950	ATL8C12103:27..3069	gap2	ATCEA4S27673, ATCEA4C40198_1, ATCEA4S621	94, 88, 86	ATL8C12103:27..3027	0.86	g3510251	66	1665	2.7e-177	(AC005310) unknown protein [Arabidopsis thaliana]
153011	ATU014951	ATL8C42999:75..369	gap2	ATCEA4C254_1,	94, 94	ATL8C42999:75..355	0.72	g3901294	66	2787	6.7e-285	(AF089711) rpp8

		7		ATCEA4S17573		2						[Arabidopsis thaliana]
153012	ATU014952	ATL8C40218:1..1398	gap2	ATCEA4S2136	94	ATL8C40218:199..1390	0.71	g2134244	66	78	8.3e-08	bitiscetin alpha chain - puff adder []
153013	ATU014953	ATL8C30297:326..870	gap2	ATCEA4S29955	94	ATL8C30297:364..865	0.65	g1853968	66	357	2.8e-29	(D88121) CPRD12 protein [Vigna unguiculata]
153014	ATU014954	ATL8C47974:906..1	gap2	ATCEA4S11699	94	ATL8C47974:304..223	0.54	g4204291	66	477	3.5e-47	(AC003027) Hypothetical protein [Arabidopsis thaliana]
153015	ATU014955	ATL8S17796:1..534	gap2	ATCEA4C43253_1	94			g2244919	66	369	2.9e-21	(Z97339) hypothetical protein [Arabidopsis thaliana]
153016	ATU014956	ATL8C50188:4943..3247	gap2	ATCEA4S6170	94	ATL8C50188:4905..3247	0.97	g3461817	65	779	1.7e-81	(AC004138) unknown protei

												n [Arabidopsis thaliana]
153017	ATU014957	ATL8C2045:1..747	gap2	ATCEA4C63734_1, ATCEA4S30163, ATCEA4S33078	94, 92, 82	ATL8C2045:319..502	0.81	g2623310	65	353	1.3e-22	(AC002409) unknown protein [Arabidopsis thaliana]
153018	ATU014958	ATL8C3247:1..2193	gap2	ATCEA4S34957	94	ATL8C3247:62..2108	0.79	g1652704	65	270	1.2e-15	(D90907) hypothetical protein [Synechocystis sp.]
153019	ATU014959	ATL8C33472:238..2886	gap2	ATCEA4S481, ATCEA4S12489, ATCEA4S33073	94, 93, 89	ATL8C33472:403..2840	0.77	g2980798	65	1883	8.7e-115	(AL022197) putative protein [Arabidopsis thaliana]
153020	ATU014960	ATL8C25603:373..1857	gap2	ATCEA4S7805	94			g4102839	65	541	8.8e-56	(AF016713) LeOPT1 [Lycopersicon esculentum]
153021	ATU014	ATL8S1	gap2	ATCEA4	94			g42062	65	496	2.6e-	(AF071

	961	6048:590..28		C23633_1				06			49	527) putative M-type thioredoxin [Arabidopsis thaliana]
153022	ATU014962	ATL8C48315:1..1576	gap2	ATCEA4S30684	94			g1769897	65	199	3.1e-18	(Y08010) lectin receptor kinase [Arabidopsis thaliana]
153023	ATU014963	ATL8C2929:3034..292	gap2	ATCEA4C116472_1, ATCEA4S31284, ATCEA4S32474	94, 90, 89	ATL8C2929:2782..292	0.82	g3885328	64	408	3.2e-32	(AC005623) putative serine/threonine protein kinase [Arabidopsis thaliana]
153024	ATU014964	ATL8C3893:1..2112	gap2	ATCEA4S24387	94	ATL8C3893:232..2112	0.81	g3068704	64	1830	3.2e-179	(AF049236) unknown [Arabidopsis thaliana]
153025	ATU014965	ATL8C46350:1529..2	gap2	ATCEA4C119775_1	94	ATL8C46350:1375..3	0.70	g1946366	64	441	3.9e-30	(U93215) unknow

		43				56						n protein [Arabidopsis thaliana]
153026	ATU014966	ATL8C20707:4056..2621	gap2	ATCEA4C7417_1	94	ATL8C20707:4052..2939	0.84	g3927825	63	861	6.0e-67	(AC005727) putative dTDP-glucose 4-6-dehydratase [Arabidopsis thaliana]
153027	ATU014967	ATL8C25589:1..2418	gap2	ATCEA4C26717_1	94	ATL8C25589:115..2364	0.74	g4835242	63	724	1.1e-67	(AL049862) putative protein [Arabidopsis thaliana]
153028	ATU014968	ATL8C30789:1691..1	gap2	ATCEA4C131839_1	94	ATL8C30789:1530..33	0.92	g4490297	62	1083	2.4e-108	(AL035678) putative protein [Arabidopsis thaliana]
153029	ATU014969	ATL8C17322:1..1235	gap2	ATCEA4S35690	94	ATL8C17322:123..1235	0.88	g3426039	62	740	6.8e-81	(AC005168) unknown protei

												n [Arabidopsis thaliana]
153030	ATU014970	ATL8C1758:1..1405	gap2	ATCEA4S391	94	ATL8C1758:256..1243	0.48	g2191131	62	1253	2.1e-104	(AF007269) A_IG002N01.8 gene product [Arabidopsis thaliana]
153031	ATU014971	ATL8C7767:2119..140	gap2	ATCEA4S25189, ATCEA4S34718	94, 90	ATL8C7767:2062..140	0.80	g2160174	61	1462	3.0e-150	(AC000132) Identical to A. thaliana PUR2 (gb|X74766). ESTs gb|ATTS3927, gb|N96446 come from this gene. [Arabidopsis thaliana]
153032	ATU014972	ATL8C8538:1..1181	gap2	ATCEA4C117409_1	94	ATL8C8538:233..1181	0.74	g3033374	61	1481	1.3e-136	(AC004238) unknown protein

												[Arabidopsis thaliana]
153033	ATU014973	ATL8C14533:3792..1	gap2	ATCEA4S178, ATCEA4S253	94, 89	ATL8C14533:3281..518	0.52	g4038057	61	588	6.0e-55	(AC005897) hypothetical protein [Arabidopsis thaliana]
153034	ATU014974	ATL8C45173:1037..1	gap2	ATCEA4S5803	94			g2651305	61	469	3.0e-42	(AC002336) hypothetical protein [Arabidopsis thaliana]
153035	ATU014975	ATL8C46605:2323..1088	gap2	ATCEA4S33178	94			g4544399	61	1404	1.0e-141	(AC007047) putative beta-ketoacyl-CoA synthase [Arabidopsis thaliana]
153036	ATU014976	ATL8C9091:1071..499	gap2	ATCEA4S8237	94			g3193315	61	277		(AF069299) contains similarity to transc

												riptional activator Ra [Arabidopsis thaliana]
153037	ATU014977	ATL8C44092:2791..865	gap2	ATCEA4S34781, ATCEA4S25040, ATCEA4C37420_1	94, 91, 89	ATL8C44092:2732..1006	0.87	g3513294	60	334	9.2e-26	(AC005591) PkB-like [Homo sapiens]
153038	ATU014978	ATL8C40792:1..334	gap2	ATCEA4C1203_1	94			g1418325	60	457	1.1e-39	(X98674) zinc finger protein [Arabidopsis thaliana]
153039	ATU014979	ATL8C36646:421..5750	gap2	ATCEA4S333	94	ATL8C36646:5482..522	0.88	g3873550	59	32	0.36	(AL033534) serine-rich protein [Schizosaccharomyces pombe]
153040	ATU014980	ATL8C43609:1..2768	gap2	ATCEA4C462_1, ATCEA4C10657_1	94, 83	ATL8C43609:127..2676	0.81	g3805849	59	2116		(AL031986) cytoplasmatic aconitate

												hydrat ase (citra te hydro-lyase) (aconi tase) (EC 4.2.1. 3) [Arabi dopsis thalia na]
153041	ATU014 981	ATL8C1 117:40 3..108 6	gap2	ATCEA4 S7871	94	ATL8C1 117:45 5..104 9	0.52	g10089 04	59	589	1.1e-63	(L4309 4) xylogl ucan endotr ansgly cosyla se [Tropa eolum majus]
153042	ATU014 982	ATL8C4 5095:2 530..3 486	gap2	ATCEA4 C3804_ 1, ATCEA4 C3804_ 2	94, 87			g60675 1	59	61	0.020	(L3493 4) RNA bindin g protei n [Droso phila melano gaster]
153043	ATU014 983	ATL8C2 8365:1 470..1	gap2	ATCEA4 C22649 _1	94	ATL8C2 8365:1 411..1 39	0.99	g26513 13	58	884	1.6e-68	(AC002 336) hypoth etical protei n [Arabi dopsis

												thaliana]
153044	ATU014984	ATL8C43523:1..1320	gap2	ATCEA4S29568, ATCEA4S34342	94, 88	ATL8C43523:237..1320	0.81	g4377346	58	416		(AE001682) CT857 hypothetical protein (possible IM protein) [Chlamydia pneumoniae]
153045	ATU014985	ATL8C48274:1657..109	gap2	ATCEA4C30951_1	94	ATL8C48274:1556..109	0.75	g2253411	58	79	0.037	(AF007219) PP2A inhibitor [Tetraodon fluviatilis]
153046	ATU014986	ATL8C22455:1..1056	gap2	ATCEA4S8085	94	ATL8C22455:223..934	0.84	g2653879	57	355	2.5e-31	(AF026389) adenylcyclase [Nicotiana tabacum]
153047	ATU014987	ATL8C33846:46..939	gap2	ATCEA4C7464_1	94	ATL8C33846:129..834	0.64	g4206196	57	328		(AF071527) hypothetical protein [Arabidopsis thaliana]

153048	ATU014988	ATL8C5002:2248..1	gap2	ATCEA4S31220	94	ATL8C5002:2248..62	0.48	g4200165	57	1203	1.4e-127	(Y16262) neutral invertase [Daucus carota]
153049	ATU014989	ATL8C27988:1070..434	gap2	ATCEA4C2431_1, ATCEA4S13846	94, 94	ATL8C27988:971..835	0.48	g2129773	57	670		xyloglucan endotransglycosylase-related protein XTR3 - Arabidopsis thaliana (fragment) [Arabidopsis thaliana]
153050	ATU014990	ATL8C24912:1..1142	gap2	ATCEA4C122073_1	94	ATL8C24912:299..1016	0.89	g2252851	56	1214	6.9e-125	(AF013294) No definition line found [Arabidopsis thaliana]
153051	ATU014991	ATL8C7837:688..1	gap2	ATCEA4S33991,	94, 94	ATL8C7837:595..194	0.73	g2231555	56	68	0.030	(U84289) actin

				ATCEA4S30706								[Amphidinium carterae]
153052	ATU014992	ATL8C11251:1107..1	gap2	ATCEA4C21168_2, ATCEA4C21168_1	94, 85			g4803924	56	672	4.2e-35	(AC006264) putative ER lumen protein retaining receptor [Arabidopsis thaliana]
153053	ATU014993	ATL8C1246:1079..1	gap2	ATCEA4S36335	94			g3164132	56	1318	2.2e-126	(D78601) cytochrome P450 monooxygenase [Arabidopsis thaliana]
153054	ATU014994	ATL8C9131:3993..1	gap2	ATCEA4C527_1	94	ATL8C9131:3950..70	0.99	g479413	55	2725		myosin-like protein - Arabidopsis thaliana []
153055	ATU014995	ATL8C49636:1..938	gap2	ATCEA4C123229_1	94	ATL8C49636:85..510	0.75	g2213632	55	550	8.4e-58	(AC000103) F21J9.24 [Arabidopsis

												thaliana]
153056	ATU014996	ATL8C8323:941..1	gap2	ATCEA4S6299	94	ATL8C8323:941..19	0.70	g4539460	55	332	2.0e-32	(AL049500) putative protein [Arabidopsis thaliana]
153057	ATU014997	ATL8C47636:2132..918	gap2	ATCEA4S35094	94	ATL8C47636:1626..1420	0.87	g4263714	54	927	2.2e-62	(AC006223) putative integral membrane protein [Arabidopsis thaliana]
153058	ATU014998	ATL8C11644:1..3030	gap2	ATCEA4S26415	94	ATL8C11644:1746..2810	0.79	g4510344, g2160149	54, 30	372, 162	2.3e-30, 2.3e-09	(AC006921) hypothetical protein [Arabidopsis thaliana]; (AC000375) No definition line found [Arabidopsis

												thaliana]
153059	ATU014999	ATL8C28374:1..1049	gap2	ATCEA4S33718, ATCEA4S31498, ATCEA4S34971	94, 91, 87	ATL8C28374:218..575	0.78	g4539457	54	941	1.2e-46	(AL049500) heat shock transcription factor-like protein [Arabidopsis thaliana]
153060	ATU015000	ATL8C26386:1177..328	gap2	ATCEA4C87528_1, ATCEA4S15400	94, 88	ATL8C26386:11011..443	0.74	g1256424	54	413	2.6e-26	(U51119) cysteine proteinase inhibitor [Brassica campestris]
153061	ATU015001	ATL8C50101:650..1	gap2	ATCEA4C17003_1	94	ATL8C50101:597..211	0.59	g4914462	54	656	1.3e-65	(AL050400) beta-carotene hydroxylase [Arabidopsis thaliana]
153062	ATU015002	ATL8C38478:1..557	gap2	ATCEA4S7619	94	ATL8C38478:54..557	0.42	g4158219	54	517	6.3e-50	(Y18623) amylogenin [Oryza

												sativa]
153063	ATU015003	ATL8C39340:1..1629	gap2	ATCEA4S13006, ATCEA4S12925	94, 87			g4544433	54	63	0.9997	(AC006955) hypothetical protein [Arabidopsis thaliana]
153064	ATU015004	ATL8C35367:1..2486	gap2	ATCEA4C110468_1, ATCEA4C21288_1, ATCEA4S10877	94, 91, 82	ATL8C35367:70..2486	0.87	g4455359	53	1390	2.4e-148	(AL035524) putative protein [Arabidopsis thaliana]
153065	ATU015005	ATL8C7896:1..1428	gap2	ATCEA4C47969_1, ATCEA4C161391_1	94, 92	ATL8C7896:115..1368	0.82	g3850585	53	1193	7.5e-85	(AC005278) ESTs gb|H36966, gb|R65511, gb|T42324 and gb|T20569 come from this gene. [Arabidopsis thaliana]
153066	ATU015006	ATL8C1228:771..1	gap2	ATCEA4S4687, ATCEA4	94, 94	ATL8C1228:660..24	0.81	g3894193	53	686	1.7e-71	(AC005662) putati

				S7442								ve strict osidin e syntha se [Arabi dopsis thalia na]
153067	ATU015 007	ATL8C1 316:96 2..1	gap2	ATCEA4 C12565 _1	94	ATL8C1 316:91 1..8	0.76	g34510 75	53	702	3.3e-68	(AL031 326) putati ve protei n [Arabi dopsis thalia na]
153068	ATU015 008	ATL8C2 291:21 41..53 54	gap2	ATCEA4 S14489	94	ATL8C2 291:22 17..48 55	0.68	g17309 89	53	57	0.81	HYPOTH ETICAL 28.8 KD PROTEI N IN DNAJ-RPSU INTERE GENIC REGION [Bacil lus subtil is]
153069	ATU015 009	ATL8C2 3045:9 00..1	gap2	ATCEA4 C467_1 , ATCEA4 S909	94, 87	ATL8C2 3045:5 33..29 6	0.59	g25982 27	53	739	2.6e-33	(AJ222 585) AT-hook protei n 1 [Arabi dopsis thalia na]

153070	ATU015010	ATL8C18700:1171..1	gap2	ATCEA4S1308, ATCEA4C10492_1	94, 91	ATL8C18700:1008..307	0.59	g2104534	53	1157	8.4e-100	(AF001308) hypothetical protein [Arabidopsis thaliana]
153071	ATU015011	ATL8C25105:1..2122	gap2	ATCEA4C14311_1	94	ATL8C25105:441..2072	0.55	g2459412	53	579	1.4e-61	(AC002332) putative G9a protein [Arabidopsis thaliana]
153072	ATU015012	ATL8C25435:556..1	gap2	ATCEA4C10605_1	94	ATL8C25435:549..30	0.49	g2104536	53	670	2.6e-61	(AF001308) predicted glycosyl transferase [Arabidopsis thaliana]
153073	ATU015013	ATL8C10966:662..2101	gap2	ATCEA4C24163_1, ATCEA4S31307	94, 84			g4262162	53	359	1.4e-39	(AC005275) putative glycosylation enzyme [Arabidopsis thaliana]
153074	ATU015	ATL8C3	gap2	ATCEA4	94, 93	ATL8C3	0.93	g11748	52	299	8.9e-	UBIQUI

	014	9184:1989..1312		S16372, ATCEA4C270_1		9184:1717..1589		44			10	TIN-CONJUGATING ENZYME E2-17 KD 2 (UBIQUITIN-PROTEIN LIGASE 2) (UBIQUITIN CARRIER PROTEIN 2) [Arabidopsis thaliana]
153075	ATU015015	ATL8C26020:871..1	gap2	ATCEA4C6582_1, ATCEA4C67133_2	94, 92	ATL8C26020:767..22	0.76	g2623303	52	1075	3.3e-106	(AC002409) putative cytochrome P450 [Arabidopsis thaliana]
153076	ATU015016	ATL8C17054:1421..1	gap2	ATCEA4S35747, ATCEA4C48900_1, ATCEA4C93718_1	94, 94, 89	ATL8C17054:1073..374	0.89	g2583124	51	1001	2.3e-102	(AC002387) 5-enolpyruvylshikimate-3-phosphate synthase (EPSP)

												[Arabidopsis thaliana]
153077	ATU015017	ATL8C46750:1..1190	gap2	ATCEA4C21561_1, ATCEA4C73563_1, ATCEA4S2815	94, 85, 84	ATL8C46750:268..917	0.82	g3915842, g3309170	51, 31	368, 115	4.0e-21, 3.9e-09	RAS-RELATED PROTEIN RAB11A [Arabidopsis thaliana]; (AF071314) COP9 complex subunit 4 [Mus musculus]
153078	ATU015018	ATL8C34236:5288..3767	gap2	ATCEA4C83481_1, ATCEA4S26185	94, 87	ATL8C34236:5122..3910	0.76	g4240169	51	156	1.2e-13	(AB020647) KIAA0840 protein [Homo sapiens]
153079	ATU015019	ATL8C21779:4036..1	gap2	ATCEA4S32014, ATCEA4C33018_1	94, 88	ATL8C21779:3986..377	0.74	g4507943	50	865	1.2e-59	exportin 1 (CRM1, yeast, homolog) [Homo sapiens]
153080	ATU015020	ATL8C11073:996..23	gap2	ATCEA4C22292_2,	94, 89			g2702269	50	578	1.3e-42	(AC003033) hypoth

		7		ATCEA4C22292_1								etical protein [Arabidopsis thaliana]
153081	ATU015021	ATL8C47608:1350..424	gap2	ATCEA4C116873_1	94			g3193326	50	724	1.0e-40	(AF069299) contains similarity to transcriptional activators such as Ra-like and myc-like regulatory R proteins [Arabidopsis thaliana]
153082	ATU015022	ATL8C49066:1604..1	gap2	ATCEA4C55088_1	94			g3885336	50	899	2.1e-88	(AC005623) receptor-like protein kinase [Arabidopsis thaliana]

153083	ATU015023	ATL8C44129:652..1	gap2	ATCEA4C70471_1	94			g2829889	50	187	2.3e-09	(AC002396) Hypothetical protein [Arabidopsis thaliana]
153084	ATU015024	ATL8C37261:1282..1	gap2	ATCEA4C360_1	94	ATL8C37261:726..74	0.97	g2353171	49	1007		(AF015542) sigma factor 1 [Arabidopsis thaliana]
153085	ATU015025	ATL8C22684:821..1	gap2	ATCEA4C136100_1	94	ATL8C22684:326..16	0.86	g2275210	49	186	4.6e-17	(AC002337) peptidyl-prolyl cis-trans isomerase isolog [Arabidopsis thaliana]
153086	ATU015026	ATL8C32151:1..667	gap2	ATCEA4S7652	94	ATL8C32151:620..66	0.65	g2392763	49	306	6.8e-28	(AC002534) hypothetical protein [Arabidopsis thaliana]
153087	ATU015027	ATL8C46360:1	gap2	ATCEA4S33378	94, 92, 84	ATL8C46360:1	0.51	g2642156	49	1143	2.1e-109	(AC003000)

		..1290		, ATCEA4S30279, ATCEA4C90768_1		46..790						hypothetical protein [Arabidopsis thaliana]
153088	ATU015028	ATL8S10755:287..1	gap2	ATCEA4S5786	94			g3935174	49	213	1.8e-14	(AC004557) F17L21.17 [Arabidopsis thaliana]
153089	ATU015029	ATL8C35355:1..1831	gap2	ATCEA4S29833	94	ATL8C35355:609..1831	0.96	g2244825	48	602	4.9e-47	(Z97336) light induced protein homolog [Arabidopsis thaliana]
153090	ATU015030	ATL8C46753:1..1414	gap2	ATCEA4C498_1	94	ATL8C46753:73..1233	0.93	g4376158	48	933	4.1e-73	(X98873) aspartate kinase [Arabidopsis thaliana]
153091	ATU015031	ATL8C15508:3334..1	gap2	ATCEA4S1484	94	ATL8C15508:3325..210	0.90	g3080412	48	1654	1.8e-163	(AL022604) putative protein [Arabi

												dopsis thaliana]
153092	ATU015032	ATL8C47097:1139..1	gap2	ATCEA4C74055_1	94	ATL8C47097:925..1111	0.88	g4539315	48	306	7.0e-13	(AL035679) putative zinc finger protein [Arabidopsis thaliana]
153093	ATU015033	ATL8C44924:844..1	gap2	ATCEA4C80954_1, ATCEA4S10344	94, 94	ATL8C44924:746..66	0.85	g2864602	48	698	1.5e-73	(Y12071) thylakoid lumen rotamase [Spinacia oleracea]
153094	ATU015034	ATL8C26890:1..2442	gap2	ATCEA4C30854_1, ATCEA4C4247_2	94, 89	ATL8C26890:2358..376	0.78	g1149556	48	226	2.2e-18	(X94443) pectin methylesterase [Vigna radiata]
153095	ATU015035	ATL8C37322:995..1	gap2	ATCEA4S6160	94	ATL8C37322:663..42	0.71	g2160190	48	1199		(AC000132) No definition line found [Arabidopsis thalia

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153096	ATU015036	ATL8C48415:1150..1	gap2	ATCEA4C35349_1, ATCEA4S27279	94, 93	ATL8C48415:1078..35	0.67	g4115371	48	543	1.6e-45	(AC005967) unknown protein [Arabidopsis thaliana]
153097	ATU015037	ATL8C31847:2638..191	gap2	ATCEA4C116018_1	94	ATL8C31847:479..338, ATL8C31847:2582..2059	0.60, 0.53	g3582334, g99861	48, 35	364, 93	5.9e-27, 0.995	(AC005496) hypothetical protein [Arabidopsis thaliana]; extensin - almond [Prunus dulcis]
153098	ATU015038	ATL8C18281:2740..1	gap2	ATCEA4C81931_1	94	ATL8C18281:2607..319	0.55	g2288988	48	1024	2.2e-93	(AC002335) hypothetical protein [Arabidopsis thaliana]
153099	ATU015039	ATL8C42523:1..1081	gap2	ATCEA4C48483_1, ATCEA4S32603, ATCEA4	94, 89, 88			g4558663	48	215	9.1e-11	(AC007063) unknown protein [Arabi

				C18817_1								dopsis thaliana]
153100	ATU015040	ATL8C19117:137..881	gap2	ATCEA4C9709_1	94			g4558669	48	551	6.6e-55	(AC007063) putative vanadate resistance protein [Arabidopsis thaliana]
153101	ATU015041	ATL8S22477:616..1	gap2	ATCEA4S1130, ATCEA4C64172_1	94, 85	ATL8S22477:472..285	0.66	g3461817	47	215	6.6e-23	(AC004138) unknown protein [Arabidopsis thaliana]
153102	ATU015042	ATL8C25514:89..2040	gap2	ATCEA4S6726	94	ATL8C25514:89..2040	0.62	g3894393	47	666	3.6e-77	(AF053998) Hcr2-5D [Lycopersicon esculentum]
153103	ATU015043	ATL8C47409:601..1	gap2	ATCEA4C29681_1, ATCEA4C19679_1	94, 83	ATL8C47409:393..94	0.60	g2245021	47	536	1.2e-41	(Z97341) heat shock protein 110 homolog [Arabi

												dopsis thaliana]
153104	ATU015044	ATL8C33203:808..1	gap2	ATCEA4C60012_1	94	ATL8C33203:808..1555	0.50	g2864619	47	210	5.6e-18	(AL021811) putative protein [Arabidopsis thaliana]
153105	ATU015045	ATL8S28915:558..1155	gap2	ATCEA4C41970_1	94			g4455227	47	248	1.0e-25	(AL035440) SNF8 like protein [Arabidopsis thaliana]
153106	ATU015046	ATL8C23306:1..1316	gap2	ATCEA4C18888_1, ATCEA4S36014, ATCEA4S26948	94, 91, 88	ATL8C23306:133..1023	0.91	g1871195	46	708	1.6e-44	(U90439) Ca++ dependent protein kinase isolog [Arabidopsis thaliana]
153107	ATU015047	ATL8C24770:952..1	gap2	ATCEA4S3408, ATCEA4S2790	94, 84	ATL8C24770:952..277	0.55	g4755199	46	207	5.3e-10	(AC007018) hypothetical protein [Arabidopsis thalia

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153108	ATU015048	ATL8C36222:726..1095	gap2	ATCEA4S30287	94	ATL8C36222:726..1055	0.51	g4309732	46	549	1.1e-46	(AC006439) hypothetical protein [Arabidopsis thaliana]
153109	ATU015049	ATL8C22692:851..1	gap2	ATCEA4C950_1, ATCEA4S22673	94, 93	ATL8C22692:749..96	0.42	g2501101	46	436	1.3e-31	SYNTAXIN HOMOLOG (PEP12 HOMOLOG) [Arabidopsis thaliana]
153110	ATU015050	ATL8C19560:1..763	gap2	ATCEA4S36259	94			g2129698	46	571	9.5e-59	protein kinase ATN1 (EC 2.7.1.-) - Arabidopsis thaliana [Arabidopsis thaliana]
153111	ATU015051	ATL8C41809:1051..1	gap2	ATCEA4S14013, ATCEA4C73999_1	94, 83	ATL8C41809:988..240	0.92	g3021270	45	1276	2.8e-93	(AL022347) serine/threonine kinase-like protei

												n [Arabidopsis thaliana]
153112	ATU015052	ATL8C14768:2119..1268	gap2	ATCEA4S7122, ATCEA4S27536	94, 84	ATL8C14768:1981..1431	0.85	g3914425	45	470	1.0e-44	PROTEASOME EPSILON CHAIN PRECURSOR (MACROPAIN EPSILON CHAIN) (MULTICATALYTIC ENDOPEPTIDASE COMPLEX EPSILON CHAIN) []
153113	ATU015053	ATL8C23455:721..1635	gap2	ATCEA4C63890_1	94	ATL8C23455:721..1627	0.79	g3236241	45	267	7.1e-24	(AC004684) putative zinc finger protein [Arabidopsis thaliana]
153114	ATU015054	ATL8C44541:1..2389	gap2	ATCEA4C142273_1, ATCEA4	94, 93, 86	ATL8C44541:116..1606	0.77	g4506491, g4558556	45, 34	234, 407	1.5e-15, 1.8e-45	replication factor C

				S34013, ATCEA4C101693_1								(activator 1) 4 (37kD) [Homo sapiens]; (AC007138) predicted protein of unknown function [Arabidopsis thaliana]
153115	ATU015055	ATL8C8177:682..1	gap2	ATCEA4C535_1, ATCEA4C535_2	94, 87	ATL8C8177:246..47	0.58	g1546698	45	607	9.2e-61	(X98808) peroxidase ATP3a [Arabidopsis thaliana]
153116	ATU015056	ATL8C43569:760..71	gap2	ATCEA4C120215_1	94	ATL8C43569:715..230	0.98	g113300	44	129		ACTIN [Phytophthora megasperma]
153117	ATU015057	ATL8C4133:1..1083	gap2	ATCEA4C53846_1, ATCEA4C17030_1	94, 93	ATL8C4133:182..1083	0.68	g2642157	44	968	1.7e-78	(AC003000) ankyrin-like protein [Arabidopsis thalia

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153118	ATU015058	ATL8C3114:2323..1	gap2	ATCEA4S32201	94	ATL8C3114:2323..302	0.61	g322228	44	439	1.5e-38	glutamate dehydrogenase (NADP+) (EC 1.4.1.4) - Corynebacterium glutamicum [Corynebacterium glutamicum]
153119	ATU015059	ATL8C45811:1..1511	gap2	ATCEA4S29874	94			g2935525	44	670	3.5e-61	(AF049067) cytochrome P450 [Pinus radiata]
153120	ATU015060	ATL8C50039:196..1218	gap2	ATCEA4S14048	94			g4432867	44	455	2.5e-50	(AC006300) putative dnaJ-like protein [Arabidopsis thaliana]
153121	ATU015061	ATL8C38112:1672..100	gap2	ATCEA4C679_3, ATCEA4C679_1	94, 94, 88, 87, 85	ATL8C38112:1196..108	0.95	g3776005	43	725	5.6e-66	(AJ010466) RNA helicase

				, ATCEA4 S17796 , ATCEA4 S32854 , ATCEA4 S29790								[Arabidopsis thaliana]
153122	ATU015062	ATL8C32670:1315..626	gap2	ATCEA4C103271_1, ATCEA4S33605	94, 85	ATL8C32670:1072..819	0.94	g4490309	43	606	7.4e-61	(AL035678) peroxidase ATP17a-like protein [Arabidopsis thaliana]
153123	ATU015063	ATL8C2033:1..817	gap2	ATCEA4C1115_1, ATCEA4S21603	94, 82	ATL8C2033:97..591	0.79	g1168530	43	652	1.2e-38	SERINE/THREONINE-PROTEIN KINASE ASK2 [Arabidopsis thaliana]
153124	ATU015064	ATL8C46648:4200..478	gap2	ATCEA4S34957	94	ATL8C46648:3886..591	0.70	g1652704	43	181	3.1e-06	(D90907) hypothetical protein [Synechocystis sp.]
153125	ATU015065	ATL8C23334:1..1882	gap2	ATCEA4C119783 1,	94, 94	ATL8C23334:67..172	0.68	g4581111	43	1129	2.9e-107	(AC005825) putati

				ATCEA4C11978 4_1		5						ve reverse transcriptase [Arabidopsis thaliana]
153126	ATU015066	ATL8C10989:905..1	gap2	ATCEA4C26767_1	94	ATL8C10989:814..56	0.64	g4678332	43	1146	8.4e-85	(AL049658) putative peptide transporter [Arabidopsis thaliana]
153127	ATU015067	ATL8C35391:1497..1	gap2	ATCEA4C23842_1	94	ATL8C35391:1298..69	0.59	g3080524	43	213	8.9e-16	(AL022599) hypothetical protein [Schizosaccharomyces pombe]
153128	ATU015068	ATL8C14116:1..1092	gap2	ATCEA4S5832	94	ATL8C14116:230..341	0.55	g2632155	43	68	0.19	(Y15320) histone H2A [Aspergillus niger]
153129	ATU015069	ATL8C23972:6573..159	gap2	ATCEA4S9996	94	ATL8C23972:6268..159	0.88	g3461842, g3461839	42, 39	163, 120	1.9e-17, 1.9e-09	(AC005315) putative recept

												or protein kinase [Arabidopsis thaliana]; (AC005315) putative receptor protein kinase [Arabidopsis thaliana]
153130	ATU015070	ATL8S19269:1..505	gap2	ATCEA4S2979	94	ATL8S19269:222..46	0.85	g3249093	42	300	6.2e-25	(AC004473) Contains similarity to heat shock transcription factor homolog from A. thaliana chromosome 4 contig gb|Z97335. [Arabi

												dopsis thaliana]
153131	ATU015071	ATL8C13945:1072..1	gap2	ATCEA4C26605_1	94	ATL8C13945:980..1233	0.80	g112802	42	417	5.7e-40	4-COUMARATE--COA LIGASE [Oryza sativa]
153132	ATU015072	ATL8C29688:1..1534	gap2	ATCEA4C2087_1, ATCEA4S29897	94, 88	ATL8C29688:381..1190	0.56	g3252815	42	774	3.8e-54	(AC004705) vacuolar sorting receptor-like protein [Arabidopsis thaliana]
153133	ATU015073	ATL8C7694:1196..1	gap2	ATCEA4S126	94			g4115354	42	880	2.0e-93	(AC005957) putative En/Spm transposon protein [Arabidopsis thaliana]
153134	ATU015074	ATL8C25518:1188..1	gap2	ATCEA4C46697_1	94			g4538912	42	590	5.8e-55	(AL049482) putative protein

												[Arabidopsis thaliana]
153135	ATU015075	ATL8C29974:1..1628	gap2	ATCEA4C135926_1	94	ATL8C29974:72..956	0.99	g3355308	41	668	1.2e-65	(AJ009695) wall-associated kinase 4 [Arabidopsis thaliana]
153136	ATU015076	ATL8C34043:672..1	gap2	ATCEA4C117995_1	94	ATL8C34043:395..176	0.96	g2739373	41	216	2.2e-16	(AC002505) putative flavonol 3-o-glucosyltransferase [Arabidopsis thaliana]
153137	ATU015077	ATL8C16228:1..623	gap2	ATCEA4S36328	94	ATL8C16228:57..150	0.88	g3915599	41	409	3.8e-34	FLORAL HOMEOTIC PROTEIN AGL3 [Arabidopsis thaliana]
153138	ATU015078	ATL8C13472:1..1036	gap2	ATCEA4C2712_1, ATCEA4S34410	94, 91	ATL8C13472:71..941	0.77	g2688830	41	703	2.2e-56	(AF000952) putative sugar transp

												orter [Prunus armeniaca]
153139	ATU015079	ATL8S13540:1..739	gap2	ATCEA4S7753	94	ATL8S13540:75..678	0.67	g481815	41	150	4.9e-08	vegetative storage protein - western balsam poplar x cotton wood [Populus trichocarpa x Populus deltoides]
153140	ATU015080	ATL8C855:240..1628	gap2	ATCEA4C35587_1, ATCEA4S29694	94, 90	ATL8C855:363..1602	0.49	g629728	41	170	0.00017	porin I, 36K - potato [Solanum tuberosum]
153141	ATU015081	ATL8C2:6161..1	gap2	ATCEA4C12254_1, ATCEA4S26242, ATCEA4C99289_1	94, 89, 84	ATL8C2:6161..2995	0.42	g4432807	41	1316	9.8e-204	(AC006570) putative polyprotein [Arabidopsis thaliana]

153142	ATU015082	ATL8C4749:967..1	gap2	ATCEA4C116037_1	94			g3786011	41	474	7.8e-38	(AC005499) putative elongation factor [Arabidopsis thaliana]
153143	ATU015083	ATL8C37379:1..588	gap2	ATCEA4S35914	94	ATL8C37379:50..588	0.80	g4503817	40	161		follicular lymphoma variant translocation 1 [Homo sapiens]
153144	ATU015084	ATL8C7927:319..1234	gap2	ATCEA4S11280	94	ATL8C7927:319..1056	0.79	g2244768	40	401	3.4e-37	(Z97335) hypothetical protein [Arabidopsis thaliana]
153145	ATU015085	ATL8C4865:1..2021	gap2	ATCEA4S12828, ATCEA4S321	94, 92	ATL8C4865:211..1387	0.79	g4432802	40	1395	3.3e-119	(AC006437) putative pol polyprotein, 5' partial [Arabidopsis thalia

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153146	ATU015086	ATL8C21934:1..786	gap2	ATCEA4S5626, ATCEA4C4761_1	94, 90	ATL8C21934:207..499	0.54	g1707955	40	485	5.5e-49	GLUTAMINE SYNTHETASE CYTOSOLIC ISOZYME 1 (GLUTAMATE--AMMONIA LIGASE) [Vitis vinifera]
153147	ATU015087	ATL8C48858:1857..875	gap2	ATCEA4S34600	94			g1352681	40	411	3.3e-28	PROTEIN PHOSPHATASE 2C (PP2C) [Arabidopsis thaliana]
153148	ATU015088	ATL8C50145:3720..2175	gap2	ATCEA4S14693	94	ATL8C50145:3165..2175	0.89	g3540188	39	907	3.9e-77	(AC004122) Hypothetical protein [Arabidopsis thaliana]
153149	ATU015089	ATL8C44894:1684..799	gap2	ATCEA4C143139_1	94	ATL8C44894:1619..845	0.84	g4006914	39	723	8.0e-33	(Z99708) serine C-palmitoyltransfera

												se like protein [Arabidopsis thaliana]
153150	ATU015090	ATL8C34260:1..2444	gap2	ATCEA4S4974, ATCEA4C28346_2, ATCEA4S21914, ATCEA4S21915, ATCEA4C28346_1	94, 93, 88, 87, 82	ATL8C34260:62..2444	0.74	g3152572	39	867	2.4e-71	(AC002986) Contains homology to DNAJ heatshock protein gb|U32803 from Haemophilus influenzae. [Arabidopsis thaliana]
153151	ATU015091	ATL8C43213:896..1	gap2	ATCEA4C9918_1	94	ATL8C43213:883..207	0.58	g3687229	39	47	0.0051	(AC005169) hypothetical protein [Arabidopsis thaliana]
153152	ATU015092	ATL8C30185:1..1161	gap2	ATCEA4C34245_1	94	ATL8C30185:95..1083	0.51	g1652280	39	366	2.0e-26	(D90904) ribonuclease II

												[Synechocystis sp.]
153153	ATU015093	ATL8C35248:250..686	gap2	ATCEA4S1364	94	ATL8C35248:302..442	0.44	g4455351	39	161	2.1e-12	(AL035524) putative protein. [Arabidopsis thaliana]
153154	ATU015094	ATL8C3391:1..841	gap2	ATCEA4S2191	94			g2979559	39	299	7.7e-28	(AC003680) putative DNA binding protein [Arabidopsis thaliana]
153155	ATU015095	ATL8C2342:1..857	gap2	ATCEA4S32910	94			g4490746	39	1018	8.3e-90	(AL035708) cytochrome P450-like protein [Arabidopsis thaliana]
153156	ATU015096	ATL8C44587:1..658	gap2	ATCEA4C985_1	94	ATL8C44587:200..328	0.94	g3421384	38	727	2.3e-78	(AF081067) IAA-Ala hydrolase; IAA-

												amino acid hydrolase [Arabidopsis thaliana]
153157	ATU015097	ATL8C29071:730..118	gap2	ATCEA4S23436	94	ATL8C29071:685..221	0.92	g133872	38	492	3.4e-45	30S RIBOSOMAL PROTEIN S1, CHLOROPLAST PRECURSOR (CS1) [Spinacia oleracea]
153158	ATU015098	ATL8C10184:1..1307	gap2	ATCEA4S8571, ATCEA4C31008_1	94, 88	ATL8C10184:61..892	0.89	g4585925	38	562		(AC007211) unknown protein [Arabidopsis thaliana]
153159	ATU015099	ATL8C42038:1462..1	gap2	ATCEA4S27393	94	ATL8C42038:1462..551	0.88	g3377830, g4586067	38, 34	755, 133	2.2e-46, 7.3e-10	(AF075598) contains similarity to Aplysia californica intermediate

												filament protein A (GB:X60297) [Arabidopsis thaliana]; (AC006194) hypothetical protein [Arabidopsis thaliana]
153160	ATU015100	ATL8C47178:1243..235	gap2	ATCEA4S2069	94	ATL8C47178:893..235	0.88	g2275201	38	1234	1.3e-127	(AC002337) unknown protein [Arabidopsis thaliana]
153161	ATU015101	ATL8C33843:1350..2077	gap2	ATCEA4C31072_1	94	ATL8C33843:1350..2051	0.87	g4006909	38	499		(Z99708) putative protein [Arabidopsis thaliana]
153162	ATU015102	ATL8C4030:1..1081	gap2	ATCEA4C4623_1	94	ATL8C4030:86..720	0.85	g3319355	38	498	6.0e-40	(AF077407) similar to chaper

												onin containing TCP-1 complex gamma chain [Arabidopsis thaliana]
153163	ATU015103	ATL8C45418:119..748	gap2	ATCEA4C1046_1, ATCEA4S14718, ATCEA4C3515_1	94, 92, 85	ATL8C45418:188..346	0.69	g2832631	38	356	4.7e-36	(AL021711) nodulin-26 -like protein [Arabidopsis thaliana]
153164	ATU015104	ATL8C665:2824..427	gap2	ATCEA4S11168	94	ATL8C665:2732..1725	0.69	g2191178	38	607	5.0e-40	(AF007270) contains similarity to MIPP proteins [Arabidopsis thaliana]
153165	ATU015105	ATL8C19483:1655..1	gap2	ATCEA4C2322_1, ATCEA4S29870, ATCEA4S33935	94, 94, 90, 90, 87, 86	ATL8C19483:1364..106	0.62	g2961378	38	1135	2.6e-129	(AL022141) putative protein [Arabidopsis

				, ATCEA4 S31734 , ATCEA4 C33820 _3, ATCEA4 S24321								thaliana]
153166	ATU015106	ATL8C6174:58..1124	gap2	ATCEA4 C29714 _1	94	ATL8C6174:58..1097	0.61	g2344889	38	766	8.9e-60	(AC002388) unknown protein [Arabidopsis thaliana]
153167	ATU015107	ATL8C20419:1497..1	gap2	ATCEA4 C3949_3, ATCEA4 C3949_1	94, 90	ATL8C20419:89..196 , ATL8C20419:1497..1136	0.45, 0.87	g4895232	38	636	2.1e-49	(AC007660) hypothetical protein [Arabidopsis thaliana]
153168	ATU015108	ATL8C5339:1..1248	gap2	ATCEA4 C75970 _1	94			g4249402	38	763	2.1e-56	(AC006072) unknown protein [Arabidopsis thaliana]
153169	ATU015109	ATL8C935:1..761	gap2	ATCEA4 C738_1	94			g113512	38	378	2.1e-22	FLORAL HOMEOTIC PROTEIN AGL2 [Arabi

												dopsis thaliana]
153170	ATU015110	ATL8C19549:93..839	gap2	ATCEA4S1034	94			g4581143	38	238	5.4e-22	(AC006919) hypothetical protein [Arabidopsis thaliana]
153171	ATU015111	ATL8C12787:1..671	gap2	ATCEA4C95697_1	94	ATL8C12787:64..617	0.85	g3024491	37	86	7.8e-06	PEROXISOMAL FARNESYLATED PROTEIN [Cricetulus griseus]
153172	ATU015112	ATL8C316:2112..1014	gap2	ATCEA4C8578_1	94	ATL8C316:1607..1215	0.84	g3892050	37	475	2.1e-48	(AC002330) hypothetical protein [Arabidopsis thaliana]
153173	ATU015113	ATL8C977:295..916	gap2	ATCEA4S797, ATCEA4S17071	94, 82	ATL8C977:483..855	0.81	g2244847	37	827	5.4e-69	(Z97337) hydroxyproline-rich glycoprotein homolog [Arabidopsis

												thaliana]
153174	ATU0151 14	ATL8C32937:734..1	gap2	ATCEA4C760_2, ATCEA4C760_1	94, 84	ATL8C32937:604..295	0.81	g1399273	37	949	7.5e-101	(U31834) calmodulin-domain protein kinase CDPK isoform 5 [Arabidopsis thaliana]
153175	ATU0151 15	ATL8S13613:491..1	gap2	ATCEA4C43881_1	94	ATL8S13613:447..149	0.55	g4580394	37	386	8.1e-40	(AC007171) putative fatty acid elongase [Arabidopsis thaliana]
153176	ATU0151 16	ATL8C35856:1287..368	gap2	ATCEA4S13098	94	ATL8C35856:1136..368	0.46	g4835794	37	189	1.7e-15	(AC007296) Strong similarity to []
153177	ATU0151 17	ATL8C23309:2854..1789	gap2	ATCEA4S34317	94			g4539452	37	1173	3.4e-122	(AL049500) putative phosphoribosylanthranilate transf

												erase [Arabidopsis thaliana]
153178	ATU015118	ATL8C9044:601..1066	gap2	ATCEA4S29643	94			g4726113	37	94		(AC006436) putative DNA topoisomerase [Arabidopsis thaliana]
153179	ATU015119	ATL8C37514:1692..32	gap2	ATCEA4C92508_1	94	ATL8C37514:1614..500	0.93	g3080374	36	255		(AL022580) putative protein [Arabidopsis thaliana]
153180	ATU015120	ATL8C24579:147..904	gap2	ATCEA4C10259_1	94	ATL8C24579:147..838	0.84	g3551247	36	699	1.1e-60	(AB012703) 181 [Daucus carota]
153181	ATU015121	ATL8C37547:889..536	gap2	ATCEA4C33076_1	94	ATL8C37547:824..699	0.73	g4510354	36	177		(AC006921) unknown protein [Arabidopsis thaliana]
153182	ATU015	ATL8C9	gap2	ATCEA4	94,	ATL8C9	0.65	g45389	36	933	1.8e-	(AL049

	122	862:1..1892		S1121, ATCEA4C5022_1, ATCEA4C35566_1	84, 83	862:463..1892		43			90	483) putative beta-galactosidase [Arabidopsis thaliana]
153183	ATU015123	ATL8C26603:116..844	gap2	ATCEA4S27834, ATCEA4S32550	94, 93			g1435022	36	165	2.4e-12	(D26576) DNA-binding protein [Daucus carota]
153184	ATU015124	ATL8S11107:1..476	gap2	ATCEA4C98695_2	94	ATL8S11107:49..223, ATL8S11107:474..374	0.98, 0.92	g3386595	35	295	1.9e-26	(AC004665) hypothetical protein [Arabidopsis thaliana]
153185	ATU015125	ATL8C3636:1350..1911	gap2	ATCEA4S253	94	ATL8C3636:1417..1578	0.97	g4773910	35	322	5.0e-30	(AF147259) No definition line found [Arabidopsis thaliana]
153186	ATU015126	ATL8S9437:1.	gap2	ATCEA4S1842	94	ATL8S9437:86	0.97	g4206196	35	489	8.7e-37	(AF071527)

		.616				..449						hypothetical protein [Arabidopsis thaliana]
153187	ATU015127	ATL8S16321:1..573	gap2	ATCEA4C16495_1	94	ATL8S16321:182..458	0.89	g2622714	35	112	1.3e-10	(AE000918) phosphonopyruvate decarboxylase [Methanobacterium thermoautotrophicum]
153188	ATU015128	ATL8C39609:1..497	gap2	ATCEA4C4163_1	94	ATL8C39609:46..450	0.85	g3522942	35	844	5.3e-85	(AC004411) hypothetical protein [Arabidopsis thaliana]
153189	ATU015129	ATL8S2618:1..706	gap2	ATCEA4C21965_1	94	ATL8S2618:93..663	0.69	g1707412	35	291	1.9e-29	(X95906) Cleavage and Polyadenylation Specificity Factor protein

												[Bos taurus]
153190	ATU0151 30	ATL8C28877:1..573	gap2	ATCEA4S8759	94	ATL8C28877:80..445	0.65	g1790922	35	392	9.0e-36	(U76670) AtDMC1 [Arabidopsis thaliana]
153191	ATU0151 31	ATL8C32287:1..2996	gap2	ATCEA4C26263_1	94	ATL8C32287:2633..1582	0.57	g4558567, g4220456	35, 30	146, 472	9.0e-08, 4.5e-36	(AC007138) hypothetical protein [Arabidopsis thaliana]; (AC006216) Strong similarity to [Arabidopsis thaliana]
153192	ATU0151 32	ATL8S14735:421..1	gap2	ATCEA4C8519_1	94	ATL8S14735:335..76	0.57	g4220512	35	590	1.6e-56	(AL035356) putative pectate lyase [Arabidopsis thaliana]
153193	ATU0151 33	ATL8C7748:752..274	gap2	ATCEA4S33581, ATCEA4	94, 87			g4589964	35	375	4.3e-37	(AC007169) delta 9

				S15293								desaturase [Arabidopsis thaliana]
153194	ATU015134	ATL8C24247:1..1270	gap2	ATCEA4S31885	94	ATL8C24247:156..21	0.86	g3776569	34	54	0.021	(AC005388) ESTs gb|R65549 and gb|AA651123 come from this gene. [Arabidopsis thaliana]
153195	ATU015135	ATL8C31233:792..1	gap2	ATCEA4S30170	94	ATL8C31233:689..113	0.62	g2245112	34	136	8.1e-09	(Z97343) hypothetical protein [Arabidopsis thaliana]
153196	ATU015136	ATL8C7483:1..1073	gap2	ATCEA4S3796	94			g4455294	34	854	1.5e-85	(AL035528) putative protein [Arabidopsis thaliana]
153197	ATU015137	ATL8C2828:968..137	gap2	ATCEA4S34561,	94, 87			g1764100	34	494	7.8e-48	(U81805) GDP-D-

		8		ATCEA4S7384								mannose-4,6-dehydratase [Arabidopsis thaliana]
153198	ATU015138	ATL8C33804:2653..180	gap2	ATCEA4C45269_1, ATCEA4S34557	94, 90	ATL8C33804:2569..198	0.93	g1078406	33	259	4.0e-18	SWH1 protein (version 2) - yeast (Saccharomyces cerevisiae) [Saccharomyces cerevisiae]
153199	ATU015139	ATL8C5012:1964..1	gap2	ATCEA4S1638	94	ATL8C5012:1964..179	0.90	g4585979	33	663	1.9e-68	(AC005287) Similar to ABC-transporter atp-binding protein [Arabidopsis thaliana]
153200	ATU015140	ATL8C34629:1..866	gap2	ATCEA4C61965_1, ATCEA4	94, 87	ATL8C34629:124..707	0.79	g4531434	33	642	4.8e-40	(AC006224) unknown

				S31291								protein [Arabidopsis thaliana]
153201	ATU0151141	ATL8C20368:670..1	gap2	ATCEA4S12018, ATCEA4C3325_7	94, 93	ATL8C20368:529..130	0.75	g2492825	33	97	4.6e-07	N-CARBAMYL-L-AMINO ACID AMIDOHYDROLASE [Bacillus stearothermophilus]
153202	ATU0151142	ATL8C8373:527..1	gap2	ATCEA4S23195	94	ATL8C8373:393..19	0.62	g4835229	33	158	4.3e-14	(AL049862) putative protein [Arabidopsis thaliana]
153203	ATU0151143	ATL8C26031:1318..1	gap2	ATCEA4C5445_1, ATCEA4S32028	94, 92	ATL8C26031:821..28	0.60	g4733973	33	237	2.1e-19	(AC007264) hypothetical protein [Arabidopsis thaliana]
153204	ATU0151144	ATL8C45304:8..2733	gap2	ATCEA4S126, ATCEA4S13040	94, 83	ATL8C45304:8..2471	0.59	g4388724	33	358	1.5e-34	(AC006413) putative Athila

												ORF1 protein [Arabidopsis thaliana]
153205	ATU015145	ATL8C26736:471..1	gap2	ATCEA4C35495_1	94			g3341672	33	653	9.3e-50	(AC003672) putative heme A:farnesyltransferase, 5' partial [Arabidopsis thaliana]
153206	ATU015146	ATL8C7556:1..924	gap2	ATCEA4C953_1	94	ATL8C7556:237..501	0.93	g1076385	32	905	7.4e-88	protein kinase (EC 2.7.1.37) tousled - Arabidopsis thaliana [Arabidopsis thaliana]
153207	ATU015147	ATL8C23460:226..1393	gap2	ATCEA4S2490	94	ATL8C23460:374..1112	0.78	g488727	32	162	1.3e-10	(X72676) 1-aminocyclopropane-1-

												carboxylate synthase [Brassica juncea]
153208	ATU015148	ATL8C39922:1..3456	gap2	ATCEA4C26015_1	94	ATL8C39922:23..2780	0.71	g3882239	32	82	2.6e-05	(AB018302) KIAA0759 protein [Homo sapiens]
153209	ATU015149	ATL8C30679:1670..100	gap2	ATCEA4C122714_1, ATCEA4S24845	94, 83	ATL8C30679:1667..100	0.96	g3695371	31	438	1.1e-28	(AF093760) DNA gyrase subunit B [Campylobacter jejuni]
153210	ATU015150	ATL8C26800:1671..1	gap2	ATCEA4C33621_1	94	ATL8C26800:1548..158	0.85	g4835753	31	1323	3.1e-127	(AC007202) Is a member of PF|00004 ATPases associated with various cellular activi

												ties (AAA) family. ESTs gb|T43031, gb|R64750, gb|AA394742 and gb|AI100347 come from this gene. [Arabidopsis thaliana]
153211	ATU015151	ATL8C30330:1..1783	gap2	ATCEA4C82690_1	94	ATL8C30330:215..463	0.68	g3510248	31	66	0.062	(AC005310) hypothetical protein [Arabidopsis thaliana]
153212	ATU015152	ATL8S18533:1..486	gap2	ATCEA4C94571_1, ATCEA4S29904	94, 84	ATL8S18533:79..445	0.53	g3184281	31	620	3.1e-53	(AC004136) putative cytochrome P450 [Arabidopsis thaliana]
153213	ATU015153	ATL8C17608:1	gap2	ATCEA4C11828	94			g4337206	31	319	2.6e-13	(AC006403)

		161..1580		2_1								putative replication factor-A protein [Arabidopsis thaliana]
153214	ATU0151154	ATL8C23292:1..723	gap2	ATCEA4C121119_1	94	ATL8C23292:302..555	0.99	g2983814	30	277	8.3e-28	(AE000739) tryptophan synthase beta subunit [Aquifex aeolicus]
153215	ATU0151155	ATL8C36070:1..1746	gap2	ATCEA4S1622	94	ATL8C36070:132..1733	0.82	g3914083	30	327	3.2e-29	MUTS2 PROTEIN [Synechocystis sp.]
153216	ATU0151156	ATL8C39572:1..1394	gap2	ATCEA4C126676_1	94	ATL8C39572:135..1340	0.75	g4572681	30	455	1.5e-37	(AC006954) putative ubiquitin carboxyl terminal hydrolase [Arabi

												dopsis thaliana]
153217	ATU0151 57	ATL8C27933:1361..1	gap2	ATCEA4C527_1, ATCEA4S33314	94, 93	ATL8C27933:1111..10	0.74	g479413	30	1503		myosin-like protein - Arabidopsis thaliana []
153218	ATU0151 58	ATL8C19522:224..988	gap2	ATCEA4C6736_1	94	ATL8C19522:302..606	0.72	g4903273	30	75	0.0047	(AF069757) spermidine synthase [Dictyostelium discoideum]
153219	ATU0151 59	ATL8S10044:601..103	gap2	ATCEA4C819_1	94	ATL8S10044:548..275	0.55	g1169200	30	495	1.5e-37	DNA-DAMAGE-REPAIR/TOLERATION PROTEIN DRT111 PRECURSOR [Arabidopsis thaliana]
153220	ATU0151 60	ATL8C31361:870..437	gap2	ATCEA4S33740	94	ATL8C31361:850..616	0.53	g1871194	30	300	2.3e-15	(U90439) DNA binding protein isolog [Arabi

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												dopsis thaliana]
153221	ATU0151 61	ATL8C25824:1022..1	gap2	ATCEA4C13508_1, ATCEA4S5994	94, 89			g4895190	30	323	9.6e-24	(AC007661) unknown protein [Arabidopsis thaliana]
153222	ATU0151 62	ATL8C6775:1493..3846	gap2	ATCEA4C5688_5, ATCEA4C47614_1, ATCEA4C5688_2	94, 92, 84			g120922	30	71	0.072	UDP-GLUCOSE 4-EPIMERASE (GALACTOWALDENASE) (UDP-GALACTOSE 4-EPIMERASE) [Rattus sp.]
153223	ATU0151 63	ATL8S29405:90..487	gap2	ATCEA4C25963_1, ATCEA4S416, ATCEA4S9499	94, 89, 82			g4432830	30	320	8.6e-26	(AC006283) similar to pheromone receptor deficient mutant [Arabidopsis thaliana]
153224	ATU0151 64	ATL8C32835:3	gap2	ATCEA4S4360	94			g4733999	30	81	0.0022	(AC007187)

		191..2790										hypothetical protein [Arabidopsis thaliana]
153225	ATU0151165	ATL8C17547:744..1	gap2	ATCEA4C4042_1, ATCEA4S25853, ATCEA4S24149	94, 84, 82			g4539944	30	160	8.2e-12	(AF133841) aldose reductase ALDRXV4 [Xerophyta viscosa]
153226	ATU0151166	ATL8C48181:912..53	gap2	ATCEA4C43981_1	94	ATL8C48181:912..53	1.00					
153227	ATU0151167	ATL8C11879:427..636	gap2	ATCEA4S3069	94	ATL8C11879:427..531	1.00					
153228	ATU0151168	ATL8C31613:2295..1478	gap2	ATCEA4S7358	94	ATL8C31613:2285..1629	1.00					
153229	ATU0151169	ATL8C42046:883..582	gap2	ATCEA4C1958_1	94	ATL8C42046:883..714	1.00					
153230	ATU0151170	ATL8C45594:189..826	gap2	ATCEA4C75922_1	94	ATL8C45594:191..826	1.00					
153231	ATU0151171	ATL8C41367:866..1	gap2	ATCEA4C34055_1	94	ATL8C41367:866..114	0.99					
153232	ATU0151172	ATL8C22244:1	gap2	ATCEA4C354_1	94	ATL8C22244:5	0.99					

		..696				7..678						
153233	ATU015173	ATL8S19083:37..597	gap2	ATCEA4C117811_1	94	ATL8S19083:131..177	0.99					
153234	ATU015174	ATL8C24995:2923..945	gap2	ATCEA4C40723_1	94	ATL8C24995:2876..945	0.99					
153235	ATU015175	ATL8C17424:1..1489	gap2	ATCEA4C59842_3, ATCEA4C6509_1	94, 84	ATL8C17424:89..1407	0.99					
153236	ATU015176	ATL8C3997:1009..211	gap2	ATCEA4S9809	94	ATL8C3997:833..211	0.99					
153237	ATU015177	ATL8S28559:1..463	gap2	ATCEA4C42093_1	94	ATL8S28559:145..463	0.99					
153238	ATU015178	ATL8C23141:464..2218	gap2	ATCEA4S1489	94	ATL8C23141:501..2218	0.99					
153239	ATU015179	ATL8S30555:2..419	gap2	ATCEA4C18473_1	94	ATL8S30555:72..204	0.99					
153240	ATU015180	ATL8S16011:342..19	gap2	ATCEA4S12616	94	ATL8S16011:342..19	0.98					
153241	ATU015181	ATL8C10306:407..1549	gap2	ATCEA4C38825_1	94	ATL8C10306:1549..407	0.98					
153242	ATU015182	ATL8C37751:2446..22	gap2	ATCEA4C101819_1, ATCEA4S24997	94, 84	ATL8C37751:2403..22	0.98					
153243	ATU015183	ATL8C16760:1	gap2	ATCEA4S23788	94	ATL8C16760:3	0.98					

		..603				51..55 1						
153244	ATU015 184	ATL8C1 8137:6 26..33 4	gap2	ATCEA4 C23015 _1	94	ATL8C1 8137:5 10..37 7	0.98					
153245	ATU015 185	ATL8C3 4698:4 76..86	gap2	ATCEA4 S5507	94	ATL8C3 4698:4 18..86	0.98					
153246	ATU015 186	ATL8S1 3823:5 85..33	gap2	ATCEA4 C4410_ 1, ATCEA4 C4410_ 2	94, 91	ATL8S1 3823:3 14..33	0.97					
153247	ATU015 187	ATL8C1 5921:1 ..1711	gap2	ATCEA4 S1128, ATCEA4 C19199 _2, ATCEA4 C19199 _1	94, 93, 83	ATL8C1 5921:9 22..12 37	0.97					
153248	ATU015 188	ATL8C1 3617:1 540..1	gap2	ATCEA4 S2104	94	ATL8C1 3617:1 540..1 81	0.97					
153249	ATU015 189	ATL8C3 713:28 22..17 26	gap2	ATCEA4 S30649	94	ATL8C3 713:28 22..17 26	0.97					
153250	ATU015 190	ATL8C1 4534:3 862..1 772	gap2	ATCEA4 S13777 , ATCEA4 C53874 _1, ATCEA4 S23240	94, 89, 89	ATL8C1 4534:2 906..1 772	0.97					
153251	ATU015 191	ATL8S1 7067:1 ..116	gap2	ATCEA4 C21092 _1	94	ATL8S1 7067:5 ..116	0.97					
153252	ATU015 192	ATL8C3 806:92	gap2	ATCEA4 C1873	94	ATL8C3 806:64	0.97					

		7..277		1		5..447						
153253	ATU015193	ATL8C14526:506..13	gap2	ATCEA4C33998_1	94	ATL8C14526:503..13	0.97					
153254	ATU015194	ATL8C19015:68..454	gap2	ATCEA4S14875, ATCEA4S13897	94, 85	ATL8C19015:400..289	0.97					
153255	ATU015195	ATL8C22225:142..1030	gap2	ATCEA4C26877_1	94	ATL8C22225:142..925	0.97					
153256	ATU015196	ATL8C49896:1639..3205	gap2	ATCEA4S34863	94	ATL8C49896:2146..3205	0.97					
153257	ATU015197	ATL8C15650:590..1	gap2	ATCEA4C2022_1	94	ATL8C15650:564..54	0.97					
153258	ATU015198	ATL8C48364:1415..976	gap2	ATCEA4C27452_1	94	ATL8C48364:1354..1245	0.97					
153259	ATU015199	ATL8C12259:2687..639	gap2	ATCEA4C141649_1	94	ATL8C12259:2687..814	0.97					
153260	ATU015200	ATL8S20020:95..563	gap2	ATCEA4S30250	94	ATL8S20020:95..389	0.96					
153261	ATU015201	ATL8C43355:526..47	gap2	ATCEA4S5776	94	ATL8C43355:526..47	0.96					
153262	ATU015202	ATL8C20542:62..1292	gap2	ATCEA4S35663, ATCEA4S29835	94, 91	ATL8C20542:62..1282	0.96					
153263	ATU015203	ATL8C6806:1911..254	gap2	ATCEA4S25383, ATCEA4S13114	94, 91	ATL8C6806:1861..796	0.96					

153264	ATU015204	ATL8C36764:5..1310	gap2	ATCEA4S36102, ATCEA4C160574_1	93, 88	ATL8C36764:136..1231	0.96	g2335099	100	1725	5.3e-181	(AC002339) unknown protein [Arabidopsis thaliana]
153265	ATU015205	ATL8C15882:1..2131	gap2	ATCEA4C26051_1	94	ATL8C15882:73..2131	0.96					
153266	ATU015206	ATL8S23103:60..478	gap2	ATCEA4C18103_1	94	ATL8S23103:60..99	0.96					
153267	ATU015207	ATL8C8639:436..1	gap2	ATCEA4C24301_1	94	ATL8C8639:436..78	0.96					
153268	ATU015208	ATL8C16928:96..922	gap2	ATCEA4C21204_1, ATCEA4S2767	94, 89	ATL8C16928:176..922	0.96					
153269	ATU015209	ATL8C25066:1701..1088	gap2	ATCEA4C19286_1, ATCEA4C19286_2	94, 92	ATL8C25066:1650..1385	0.95					
153270	ATU015210	ATL8C38300:200..793	gap2	ATCEA4C7315_1	94	ATL8C38300:624..737	0.95					
153271	ATU015211	ATL8C4651:69..1271	gap2	ATCEA4C12423_1	94	ATL8C4651:69..1060	0.95					
153272	ATU015212	ATL8C41770:1525..35	gap2	ATCEA4S820	94	ATL8C41770:1525..208	0.95					
153273	ATU015213	ATL8C13182:6	gap2	ATCEA4C49945	94, 92	ATL8C13182:2	0.95					

		24..1		_1, ATCEA4 C49945 _2		95..22 1						
153274	ATU015 214	ATL8C1 685:11 ..3087	gap2	ATCEA4 S13139	94	ATL8C1 685:11 ..3087	0.95					
153275	ATU015 215	ATL8C3 4386:1 364..1	gap2	ATCEA4 S981	94	ATL8C3 4386:1 364..2 58	0.95					
153276	ATU015 216	ATL8C1 1774:3 01..98	gap2	ATCEA4 C48254 _1	94	ATL8C1 1774:2 69..10 0	0.95					
153277	ATU015 217	ATL8C7 918:11 33..82 0	gap2	ATCEA4 C9827_ 1	94	ATL8C7 918:11 00..82 0	0.94					
153278	ATU015 218	ATL8C3 8091:1 ..1054	gap2	ATCEA4 C16376 _1	94	ATL8C3 8091:1 37..10 54	0.94					
153279	ATU015 219	ATL8C1 7590:7 88..47 4	gap2	ATCEA4 S3083	94	ATL8C1 7590:7 04..47 4	0.94					
153280	ATU015 220	ATL8S3 0064:1 ..387	gap2	ATCEA4 S26388	94	ATL8S3 0064:3 87..1	0.94					
153281	ATU015 221	ATL8S3 0033:6 01..1	gap2	ATCEA4 C2042_ 1	94	ATL8S3 0033:4 68..47	0.94					
153282	ATU015 222	ATL8C1 6521:2 01..17 38	gap2	ATCEA4 S30652	94	ATL8C1 6521:2 01..17 38	0.94					
153283	ATU015 223	ATL8C4 2177:1 023..5 01	gap2	ATCEA4 S35250	94	ATL8C4 2177:9 03..76 5	0.94					
153284	ATU015 224	ATL8C2 840:94 8..1	gap2	ATCEA4 C37887 _1	94	ATL8C2 840:88 7..564	0.94					

153285	ATU0152225	ATL8C46224:180..816	gap2	ATCEA4S29949, ATCEA4S23830	94, 92	ATL8C46224:180..593	0.94					
153286	ATU0152226	ATL8S22140:511..62	gap2	ATCEA4S11239, ATCEA4C4609_1	94, 82	ATL8S22140:465..62	0.94					
153287	ATU0152227	ATL8S30019:543..1	gap2	ATCEA4S26258	94	ATL8S30019:543..165	0.94					
153288	ATU0152228	ATL8S21925:417..112	gap2	ATCEA4S6209	94	ATL8S21925:217..112	0.94					
153289	ATU0152229	ATL8C35972:556..1	gap2	ATCEA4C15536_1, ATCEA4S35443	94, 86	ATL8C35972:443..50	0.94					
153290	ATU0152230	ATL8C12704:1769..1040	gap2	ATCEA4C5143_1	94	ATL8C12704:1769..1040	0.94					
153291	ATU0152231	ATL8C38250:428..1	gap2	ATCEA4S31449	94	ATL8C38250:403..289	0.93					
153292	ATU0152232	ATL8C21028:2144..216	gap2	ATCEA4S29905, ATCEA4C17060_1	94, 90	ATL8C21028:1829..330	0.93					
153293	ATU0152233	ATL8C24853:1319..305	gap2	ATCEA4S16979	94	ATL8C24853:1319..459	0.93					
153294	ATU0152234	ATL8C29589:1	gap2	ATCEA4S14260	94	ATL8C29589:1	0.93					

		177..609				177..700						
153295	ATU0152235	ATL8C18097:883..77	gap2	ATCEA4S30581	94	ATL8C18097:883..77	0.93					
153296	ATU0152236	ATL8C982:1..869	gap2	ATCEA4S3101, ATCEA4C679_1, ATCEA4S11637	94, 91, 84	ATL8C982:81..606	0.93					
153297	ATU0152237	ATL8C13287:2480..898	gap2	ATCEA4C25444_1	94	ATL8C13287:2480..1135	0.93					
153298	ATU0152238	ATL8S889:386..1	gap2	ATCEA4C1934_1, ATCEA4S33784, ATCEA4S35020	94, 90, 89	ATL8S889:321..265	0.93					
153299	ATU0152239	ATL8C8210:1..974	gap2	ATCEA4C35297_2, ATCEA4S27624	94, 87	ATL8C8210:256..974	0.93					
153300	ATU0152240	ATL8C6427:984..70	gap2	ATCEA4S2087	94	ATL8C6427:984..70	0.93					
153301	ATU0152241	ATL8C2174:746..139	gap2	ATCEA4C911_1, ATCEA4C911_3	94, 82	ATL8C2174:584..139	0.93					
153302	ATU0152242	ATL8C36559:2504..4392	gap2	ATCEA4S7569	94	ATL8C36559:2504..4373	0.93					
153303	ATU0152243	ATL8C49237:1389..4	gap2	ATCEA4C23390_1,	94, 89	ATL8C49237:1311..4	0.92					

		4		ATCEA4C44084_1		4						
153304	ATU015244	ATL8C699:75..1375	gap2	ATCEA4C16246_1, ATCEA4S5476	94, 85	ATL8C699:75..1245	0.92					
153305	ATU015245	ATL8C18353:262..1643	gap2	ATCEA4C31572_1	94	ATL8C18353:262..1643	0.92					
153306	ATU015246	ATL8C10814:1621..1	gap2	ATCEA4C6413_1	94	ATL8C10814:1621..9	0.92					
153307	ATU015247	ATL8C29880:478..828	gap2	ATCEA4C5480_1	94	ATL8C29880:525..806	0.92					
153308	ATU015248	ATL8C3741:2248..1	gap2	ATCEA4C32047_1, ATCEA4S32231, ATCEA4S2000	94, 92, 86	ATL8C3741:2248..62	0.91					
153309	ATU015249	ATL8C42806:4223..498	gap2	ATCEA4S35743	94	ATL8C42806:4223..498	0.91					
153310	ATU015250	ATL8C4950:1556..2405	gap2	ATCEA4C17938_1, ATCEA4S27112, ATCEA4S31719, ATCEA4C17938_2	93, 93, 87, 86	ATL8C4950:1557..2284	0.91	g3249098	100	332	1.0e-24	(AC003114) ESTs gb|T04610, gb|N38459, gb|T45174, gb|R30481 and gb|N64

												971 come from this gene. [Arabidopsis thaliana]
153311	ATU015251	ATL8C46967:32..483	gap2	ATCEA4C21428_1	94	ATL8C46967:308..483	0.91					
153312	ATU015252	ATL8C35542:742..1	gap2	ATCEA4C23316_1	94	ATL8C35542:222..148	0.91					
153313	ATU015253	ATL8C22808:4488..5975	gap2	ATCEA4S126	94	ATL8C22808:4488..5975	0.91					
153314	ATU015254	ATL8C11111:181..1766	gap2	ATCEA4S4667, ATCEA4S4668	94, 85	ATL8C11111:181..1766	0.91					
153315	ATU015255	ATL8C48767:1514..172	gap2	ATCEA4C20162_2, ATCEA4S23619	94, 87	ATL8C48767:846..172	0.91					
153316	ATU015256	ATL8C5970:670..89	gap2	ATCEA4C45225_1	94	ATL8C5970:670..238	0.91					
153317	ATU015257	ATL8C9808:2754..24	gap2	ATCEA4C47208_1	94	ATL8C9808:2754..24	0.90					
153318	ATU015258	ATL8S28753:443..60	gap2	ATCEA4S33479	94	ATL8S28753:443..214	0.90					
153319	ATU015259	ATL8S6837:1..495	gap2	ATCEA4C35455_1	94	ATL8S6837:24..495	0.90					
153320	ATU015	ATL8C5	gap2	ATCEA4	94, 93	ATL8C5	0.90					

	260	636:1722..417		S35751, ATCEA4S6343		636:1393..417						
153321	ATU015261	ATL8S547:1..422	gap2	ATCEA4C47959_1, ATCEA4S35853, ATCEA4S22846	94, 90, 88	ATL8S547:73..269	0.90					
153322	ATU015262	ATL8S5692:432..1	gap2	ATCEA4S16812, ATCEA4S26302, ATCEA4S23454	94, 93, 82	ATL8S5692:432..299	0.90					
153323	ATU015263	ATL8C27740:333..1930	gap2	ATCEA4S30398, ATCEA4S30512	94, 92	ATL8C27740:333..1633	0.90					
153324	ATU015264	ATL8C1231:2839..4415	gap2	ATCEA4C300_1, ATCEA4S24846	93, 91	ATL8C1231:2839..4203	0.89	g2129726	100	1457	1.9e-142	RNA polymerase II third largest chain RPB35.5A - Arabidopsis thaliana [Arabidopsis thaliana]
153325	ATU015	ATL8C5	gap2	ATCEA4	94	ATL8C5	0.89					

	265	664:29..366		C20533 1		664:29..366						
153326	ATU015 266	ATL8C4 1364:731..1192	gap2	ATCEA4 S10984	94	ATL8C4 1364:738..970	0.89					
153327	ATU015 267	ATL8C1 7181:735..1	gap2	ATCEA4 S2344	94	ATL8C1 7181:735..210	0.89					
153328	ATU015 268	ATL8C2 3906:3622..212	gap2	ATCEA4 S13565	93	ATL8C2 3906:3622..339	0.89	g2190543, g2190544	100, 100	526, 1205	6.3e-31, 9.2e-110	(AC001229) EST gb|N37484 comes from this gene. [Arabidopsis thaliana]; (AC001229) Similar to Saccharomyces hypothetical protein P9642.2 (gb|U40828). [Arabidopsis thaliana]
153329	ATU015 269	ATL8C4 4906:1792..1	gap2	ATCEA4 S35959	94	ATL8C4 4906:1792..4	0.89					

						3						
153330	ATU015270	ATL8C45839:1548..183	gap2	ATCEA4C27901_1	94	ATL8C45839:1109..183	0.89					
153331	ATU015271	ATL8C16479:2416..1169	gap2	ATCEA4C44771_1	94	ATL8C16479:2416..1169	0.89					
153332	ATU015272	ATL8C45830:551..4075	gap2	ATCEA4S5895	94	ATL8C45830:820..4075	0.89					
153333	ATU015273	ATL8C1279:827..510	gap2	ATCEA4C117923_1	94	ATL8C1279:686..569	0.89					
153334	ATU015274	ATL8C18787:66..524	gap2	ATCEA4S7410, ATCEA4S26324	94, 87	ATL8C18787:183..524	0.89					
153335	ATU015275	ATL8C20866:1725..354	gap2	ATCEA4S10003, ATCEA4C11093_1	93, 89	ATL8C20866:1692..354	0.89	g4027899	100	609	4.2e-59	(AF049354) alpha-expansin precursor [Nicotiana tabacum]
153336	ATU015276	ATL8C28603:470..1	gap2	ATCEA4S32982, ATCEA4S28615	94, 94	ATL8C28603:421..244	0.89					
153337	ATU015277	ATL8C4656:1337..670	gap2	ATCEA4S31708	94	ATL8C4656:1104..670	0.89					
153338	ATU015278	ATL8S4965:1..259	gap2	ATCEA4S36321, ATCEA4	94, 90	ATL8S4965:4..117	0.88					

				S22855								
153339	ATU0152 79	ATL8C9 762:25 4..277 3	gap2	ATCEA4 S13135	94	ATL8C9 762:27 73..25 4	0.88					
153340	ATU0152 80	ATL8C2 17:167 8..1	gap2	ATCEA4 S6411, ATCEA4 C16367 _1	94, 93	ATL8C2 17:167 8..292	0.88					
153341	ATU0152 81	ATL8C2 6732:1 438..2 314	gap2	ATCEA4 C33939 _1	94	ATL8C2 6732:1 438..2 243	0.88					
153342	ATU0152 82	ATL8S4 078:16 6..487	gap2	ATCEA4 C20905 _1	94	ATL8S4 078:19 2..456	0.88					
153343	ATU0152 83	ATL8C1 2675:7 10..1	gap2	ATCEA4 S5909, ATCEA4 C27940 _1	94, 85	ATL8C1 2675:5 68..10 9	0.88					
153344	ATU0152 84	ATL8C2 4694:1 ..672	gap2	ATCEA4 C48910 _1	94	ATL8C2 4694:1 66..67 2	0.88					
153345	ATU0152 85	ATL8C4 84:137 8..1	gap2	ATCEA4 C28524 _1, ATCEA4 S19125	94, 90	ATL8C4 84:133 2..268	0.88					
153346	ATU0152 86	ATL8C4 0855:7 85..17 7	gap2	ATCEA4 C30514 _1	94	ATL8C4 0855:4 02..18 0	0.88					
153347	ATU0152 87	ATL8C1 1062:3 2..750	gap2	ATCEA4 S11336	94	ATL8C1 1062:7 9..750	0.88					
153348	ATU0152 88	ATL8C2 7187:1 05..40 3	gap2	ATCEA4 C8303_ 1	94	ATL8C2 7187:1 05..16 9	0.88					
153349	ATU0152 89	ATL8C6 907:28	gap2	ATCEA4 C11670	94	ATL8C6 907:28	0.88					

		57..1287		6_1		57..1287						
153350	ATU0152290	ATL8C19332:122..444	gap2	ATCEA4C1922_1	94	ATL8C19332:122..444	0.88					
153351	ATU0152291	ATL8C37908:228..2072	gap2	ATCEA4S10375	94	ATL8C37908:228..2072	0.88					
153352	ATU0152292	ATL8C32115:1117..573	gap2	ATCEA4S7711	94	ATL8C32115:942..573	0.88					
153353	ATU0152293	ATL8C34000:391..1760	gap2	ATCEA4C69888_1	94	ATL8C34000:391..1647	0.88					
153354	ATU0152294	ATL8C37564:779..1	gap2	ATCEA4C45973_1	94	ATL8C37564:677..131	0.87					
153355	ATU0152295	ATL8C21915:93..1078	gap2	ATCEA4S6954	94	ATL8C21915:411..1073	0.87					
153356	ATU0152296	ATL8S12777:717..90	gap2	ATCEA4C129520_1	94	ATL8S12777:611..320	0.87					
153357	ATU0152297	ATL8C42472:1..813	gap2	ATCEA4S27844, ATCEA4C2666_1, ATCEA4S31310, ATCEA4C2666_2, ATCEA4S31124	94, 93, 86, 83, 82	ATL8C42472:204..642	0.87					

153358	ATU015298	ATL8C26218:1..821	gap2	ATCEA4C117920_1	94	ATL8C26218:212..821	0.87					
153359	ATU015299	ATL8C8947:1939..392	gap2	ATCEA4S28248, ATCEA4C0_12, ATCEA4S21433, ATCEA4S4568, ATCEA4S15282, ATCEA4S24560, ATCEA4S36212	94, 93, 92, 85, 84, 83, 82	ATL8C8947:646..1924	0.87					
153360	ATU015300	ATL8C34936:2738..772	gap2	ATCEA4C22164_1, ATCEA4S32777, ATCEA4S35846	93, 90, 89	ATL8C34936:2548..1002	0.87	g4454051	100	1426	1.4e-142	(AL035394) putative polygalacturonase [Arabidopsis thaliana]
153361	ATU015301	ATL8C26156:886..159	gap2	ATCEA4C18196_1	94	ATL8C26156:886..175	0.87					
153362	ATU015302	ATL8C12127:646..42	gap2	ATCEA4C43514_1	94	ATL8C12127:369..42	0.87					
153363	ATU015303	ATL8C27239:1726..88	gap2	ATCEA4C9983_1	94	ATL8C27239:1647..88	0.87					

SUBSTITUTE SHEET (RULE 26)

153364	ATU015304	ATL8C26510:1247..1	gap2	ATCEA4C9965_1	94	ATL8C26510:1247..10	0.87					
153365	ATU015305	ATL8C9822:680..1204	gap2	ATCEA4C15381_1, ATCEA4S8169	94, 83	ATL8C9822:1019..798	0.86					
153366	ATU015306	ATL8C30793:2253..1546	gap2	ATCEA4S178, ATCEA4S253	94, 86	ATL8C30793:2163..1546	0.86					
153367	ATU015307	ATL8C14681:1003..12	gap2	ATCEA4S808	94	ATL8C14681:1003..12	0.86					
153368	ATU015308	ATL8C10498:1017..1	gap2	ATCEA4C74068_1, ATCEA4S32357	94, 94	ATL8C10498:965..150	0.86					
153369	ATU015309	ATL8C26597:434..2602	gap2	ATCEA4S7971, ATCEA4S12612	94, 90	ATL8C26597:434..2599	0.86					
153370	ATU015310	ATL8C16086:151..636	gap2	ATCEA4S452	94	ATL8C16086:151..262	0.86					
153371	ATU015311	ATL8C25248:485..2646	gap2	ATCEA4S10956, ATCEA4S33686	94, 90	ATL8C25248:485..2524	0.86					
153372	ATU015312	ATL8C30418:2432..4088	gap2	ATCEA4S8163, ATCEA4S11338	94, 93	ATL8C30418:2554..4088	0.85					
153373	ATU015313	ATL8C6975:1547..199	gap2	ATCEA4S31698	94	ATL8C6975:1475..199	0.85					
153374	ATU015	ATL8C3	gap2	ATCEA4	94	ATL8C3	0.85					

	314	3976:1413..894		S34879		3976:1274..994						
153375	ATU015315	ATL8C42179:2140..1	gap2	ATCEA4C8965_3, ATCEA4C8965_2, ATCEA4C8965_1, ATCEA4S19672	94, 93, 92, 84	ATL8C42179:2085..786	0.85					
153376	ATU015316	ATL8C26924:1001..59	gap2	ATCEA4C26643_1	94	ATL8C26924:707..408	0.85					
153377	ATU015317	ATL8C35996:1..788	gap2	ATCEA4C28042_1	94	ATL8C35996:167..752	0.85					
153378	ATU015318	ATL8C13419:1163..1	gap2	ATCEA4C17937_1	94	ATL8C13419:1163..48	0.85					
153379	ATU015319	ATL8C2563:267..700	gap2	ATCEA4S26477	94	ATL8C2563:552..697	0.85					
153380	ATU015320	ATL8C38108:2905..60	gap2	ATCEA4S8415	94	ATL8C38108:2905..60	0.84					
153381	ATU015321	ATL8C29779:1658..240	gap2	ATCEA4S24395	94	ATL8C29779:1642..240	0.84					
153382	ATU015322	ATL8C39850:487..1286	gap2	ATCEA4C31683_1	94	ATL8C39850:544..1286	0.84					
153383	ATU015323	ATL8C19289:1..1314	gap2	ATCEA4S13193	94	ATL8C19289:257..13	0.84					

						14						
153384	ATU015324	ATL8C15364:109..724	gap2	ATCEA4S33894	94	ATL8C15364:109..528	0.84					
153385	ATU015325	ATL8C38111:3768..1	gap2	ATCEA4C122152_1	94	ATL8C38111:3768..47	0.84					
153386	ATU015326	ATL8C48068:405..143	gap2	ATCEA4C5216_2, ATCEA4C5216_3	94, 89	ATL8C48068:405..238	0.83					
153387	ATU015327	ATL8C22366:268..5350	gap2	ATCEA4S178, ATCEA4S81	93, 91	ATL8C22366:319..4454	0.83	g4567296, g4773910	100, 68	2357, 532	8.0e-218, 1.6e-35	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
153388	ATU015328	ATL8C22071:932..1	gap2	ATCEA4C18992_1	94	ATL8C22071:932..174	0.83					

153389	ATU015329	ATL8C5595:1084..374	gap2	ATCEA4S31195	94	ATL8C5595:1058..378	0.83					
153390	ATU015330	ATL8C12556:260..1560	gap2	ATCEA4S27369	94	ATL8C12556:1560..260	0.83					
153391	ATU015331	ATL8C38587:1166..138	gap2	ATCEA4C72777_1	94	ATL8C38587:1166..138	0.83					
153392	ATU015332	ATL8C14553:1..693	gap2	ATCEA4C24800_1	94	ATL8C14553:61..693	0.83					
153393	ATU015333	ATL8C45214:2302..8	gap2	ATCEA4S344, ATCEA4S178, ATCEA4S253	93, 92, 86	ATL8C45214:2064..8	0.83	g4038066	100	654	3.3e-33	(AC005897) hypothetical protein [Arabidopsis thaliana]
153394	ATU015334	ATL8C28331:165..1155	gap2	ATCEA4C28969_1	94	ATL8C28331:165..736	0.82					
153395	ATU015335	ATL8C48927:1349..140	gap2	ATCEA4S35075	94	ATL8C48927:1349..341	0.82					
153396	ATU015336	ATL8C30465:720..1	gap2	ATCEA4C33187_1	94	ATL8C30465:720..379	0.82					
153397	ATU015337	ATL8C21521:1095..145	gap2	ATCEA4S33466	94	ATL8C21521:1095..345	0.81					
153398	ATU015338	ATL8C22315:392..12	gap2	ATCEA4S14420	94	ATL8C22315:392..30	0.81					

		8				5						
153399	ATU015339	ATL8C33742:186..925	gap2	ATCEA4C26013_2, ATCEA4S32960	94, 87	ATL8C33742:414..696	0.81					
153400	ATU015340	ATL8C44856:1..1118	gap2	ATCEA4C33805_1, ATCEA4S10617	94, 93	ATL8C44856:72..307, ATL8C44856:900..1118	0.81, 0.66					
153401	ATU015341	ATL8C44786:1173..198	gap2	ATCEA4S35253, ATCEA4S33493	94, 93	ATL8C44786:1173..674	0.81					
153402	ATU015342	ATL8C31889:1772..2345	gap2	ATCEA4C117795_1	94	ATL8C31889:1772..2333	0.81					
153403	ATU015343	ATL8C3909:1615..145	gap2	ATCEA4C51615_1	94	ATL8C3909:1290..145	0.81					
153404	ATU015344	ATL8C34859:3348..66	gap2	ATCEA4S11459, ATCEA4S7874	94, 88	ATL8C34859:3273..66	0.81					
153405	ATU015345	ATL8C37794:122..1863	gap2	ATCEA4S10839	94	ATL8C37794:122..1863	0.80					
153406	ATU015346	ATL8C28809:747..1	gap2	ATCEA4S34773, ATCEA4C28580_1	94, 88	ATL8C28809:723..61	0.80					
153407	ATU015347	ATL8S15268:5	gap2	ATCEA4S31348	94	ATL8S15268:3	0.80					

		55..1				98..46						
153408	ATU015348	ATL8C38882:15..448	gap2	ATCEA4C99870_1	94	ATL8C38882:80..448	0.80					
153409	ATU015349	ATL8C12420:360..1989	gap2	ATCEA4S34925	94	ATL8C12420:360..1821	0.80					
153410	ATU015350	ATL8C19609:5..685	gap2	ATCEA4S32933	94	ATL8C19609:5..508	0.80					
153411	ATU015351	ATL8C2911:99..1278	gap2	ATCEA4S4915, ATCEA4C6178_1	94, 94	ATL8C2911:193..1278	0.80					
153412	ATU015352	ATL8C11130:1..95	gap2	ATCEA4C31736_1, ATCEA4S31749	94, 85	ATL8C11130:47..91	0.80					
153413	ATU015353	ATL8C11327:2505..2111	gap2	ATCEA4C2411_1	94	ATL8C11327:2431..2202	0.80					
153414	ATU015354	ATL8C30329:247..590	gap2	ATCEA4S36056	94	ATL8C30329:248..475	0.79					
153415	ATU015355	ATL8C39167:7017..2528	gap2	ATCEA4S33561	94	ATL8C39167:7017..2627	0.79					
153416	ATU015356	ATL8C29168:1..595	gap2	ATCEA4C28494_1, ATCEA4S24131, ATCEA4C28494_2, ATCEA4S2367	94, 90, 89, 82	ATL8C29168:47..423	0.79					

153417	ATU0153357	ATL8C7955:1727..596	gap2	ATCEA4S33533	94	ATL8C7955:1727..596	0.79					
153418	ATU0153358	ATL8C31119:1755..1	gap2	ATCEA4C73684_1, ATCEA4S27831	94, 86	ATL8C31119:1755..192	0.79					
153419	ATU0153359	ATL8C26654:1..383	gap2	ATCEA4S12059	94	ATL8C26654:65..383	0.78					
153420	ATU0153360	ATL8C13927:6234..3256	gap2	ATCEA4S34573, ATCEA4S26887, ATCEA4C117068_1, ATCEA4C137739_1	94, 92, 91, 86	ATL8C13927:6234..3627	0.78					
153421	ATU0153361	ATL8C412:362..2942	gap2	ATCEA4C98445_1	94	ATL8C412:2942..362	0.78					
153422	ATU0153362	ATL8C4540:3191..2698	gap2	ATCEA4S11253	94	ATL8C4540:3191..2797	0.78					
153423	ATU0153363	ATL8C1206:1..841	gap2	ATCEA4C18046_1, ATCEA4S35437	94, 84	ATL8C1206:166..841	0.78					
153424	ATU0153364	ATL8C22570:215..1728	gap2	ATCEA4S24796, ATCEA4S35010	94, 85	ATL8C22570:215..1728	0.78					
153425	ATU0153365	ATL8C25114:253..26	gap2	ATCEA4C4593_1,	94, 86	ATL8C25114:253..26	0.78					

		72		ATCEA4S30273		72						
153426	ATU0153366	ATL8C47470:489..766	gap2	ATCEA4S16923, ATCEA4C9864_1	94, 92	ATL8C47470:527..682	0.78					
153427	ATU0153367	ATL8C41353:834..373	gap2	ATCEA4C60048_1	94	ATL8C41353:806..373	0.78					
153428	ATU0153368	ATL8C48143:1094..1551	gap2	ATCEA4C112776_1	94	ATL8C48143:1125..1551	0.78					
153429	ATU0153369	ATL8C16399:1..789	gap2	ATCEA4C20007_1	94	ATL8C16399:275..789	0.77					
153430	ATU0153370	ATL8C44509:1277..121	gap2	ATCEA4S13057, ATCEA4C353061	94, 83	ATL8C44509:1277..121	0.77					
153431	ATU0153371	ATL8C30677:1..1297	gap2	ATCEA4C41813_1	94	ATL8C30677:225..1297	0.77					
153432	ATU0153372	ATL8C35184:952..1237	gap2	ATCEA4C118780_1	94	ATL8C35184:987..1066	0.77					
153433	ATU0153373	ATL8C4952:4044..265	gap2	ATCEA4C100670_1, ATCEA4S34469	94, 92	ATL8C4952:4044..265	0.77					
153434	ATU0153374	ATL8C25918:702..1066	gap2	ATCEA4C10241_1, ATCEA4S5355	94, 91	ATL8C25918:920..791	0.77					

153435	ATU015375	ATL8C39988:255..784	gap2	ATCEA4C6251_1	94	ATL8C39988:463..784	0.76					
153436	ATU015376	ATL8S14852:1..563	gap2	ATCEA4S33336, ATCEA4S33803, ATCEA4S28417	94, 91, 84	ATL8S14852:563..486	0.76					
153437	ATU015377	ATL8C214:794..465	gap2	ATCEA4S31984	94	ATL8C214:794..664	0.76					
153438	ATU015378	ATL8C27699:1..1189	gap2	ATCEA4C21830_1, ATCEA4S20794	94, 91	ATL8C27699:490..1013	0.76					
153439	ATU015379	ATL8C4204:695..261	gap2	ATCEA4S199	94	ATL8C4204:624..261	0.76					
153440	ATU015380	ATL8C15943:1..550	gap2	ATCEA4C89430_1, ATCEA4S29376	94, 87	ATL8C15943:99..211	0.76					
153441	ATU015381	ATL8C7397:1..2181	gap2	ATCEA4C41669_1, ATCEA4S6057	94, 85	ATL8C7397:86..2181	0.76					
153442	ATU015382	ATL8C10385:1..571	gap2	ATCEA4C68544_3, ATCEA4C68544_1, ATCEA4S34123	94, 87, 86	ATL8C10385:255..385	0.76					
153443	ATU015383	ATL8C48157:1864..1	gap2	ATCEA4S30866,	94, 83	ATL8C48157:1864..2	0.76					

				ATCEA4S2585		26						
153444	ATU015384	ATL8S18495:313..1	gap2	ATCEA4C9453_1	94	ATL8S18495:262..22	0.76					
153445	ATU015385	ATL8C47738:1809..1	gap2	ATCEA4C43457_1, ATCEA4S32240	94, 91	ATL8C47738:1809..137	0.75					
153446	ATU015386	ATL8C12713:1..3796	gap2	ATCEA4C518_1, ATCEA4C74053_1	93, 92	ATL8C12713:532..3632	0.75	g2160191	100	1767	3.0e-176	(AC000132) Identical to A. thaliana AtK-1 (gb|X79279). [Arabidopsis thaliana]
153447	ATU015387	ATL8C44316:956..339	gap2	ATCEA4S29903	94	ATL8C44316:956..339	0.75					
153448	ATU015388	ATL8C22550:1..824	gap2	ATCEA4S3547	94	ATL8C22550:106..824	0.75					
153449	ATU015389	ATL8C33773:867..1	gap2	ATCEA4S32022, ATCEA4S13824	94, 86	ATL8C33773:867..7	0.75					
153450	ATU015390	ATL8C17275:327..1998	gap2	ATCEA4S3786	93	ATL8C17275:390..1998	0.75	g4415909	100	1207	2.4e-68	(AC006282) LEA protein AtECP63

												[Arabidopsis thaliana]
153451	ATU015391	ATL8C38138:2298..618	gap2	ATCEA4S3417	93	ATL8C38138:2298..618	0.75	g4587553	100	820	1.5e-69	(AC006577) F15I1.20 [Arabidopsis thaliana]
153452	ATU015392	ATL8C31332:1..535	gap2	ATCEA4C14856_1	94	ATL8C31332:256..454	0.75					
153453	ATU015393	ATL8C44382:5909..3468	gap2	ATCEA4S1006	93	ATL8C44382:5909..3553	0.75	g4263063	100	2511	7.2e-186	(AC005142) hypothetical protein [Arabidopsis thaliana]
153454	ATU015394	ATL8S13793:221..415	gap2	ATCEA4C27346_1	94	ATL8S13793:227..349	0.75					
153455	ATU015395	ATL8C35738:3612..6821	gap2	ATCEA4C2805_1	94	ATL8C35738:3612..6747	0.75					
153456	ATU015396	ATL8C23120:1476..1	gap2	ATCEA4C116528_1, ATCEA4C59950_1	94, 90	ATL8C23120:1467..335	0.75					
153457	ATU015397	ATL8C11513:530..1285	gap2	ATCEA4S2031	94	ATL8C11513:596..1285	0.75					

153458	ATU015398	ATL8C36922:1624..371	gap2	ATCEA4S2095	94	ATL8C36922:1497..371	0.74					
153459	ATU015399	ATL8C25792:1916..74	gap2	ATCEA4C7082_3, ATCEA4C7082_2	94, 91	ATL8C25792:1916..74	0.74					
153460	ATU015400	ATL8C31022:1703..62	gap2	ATCEA4C13_3, ATCEA4C576_1, ATCEA4S34204, ATCEA4C793_2, ATCEA4S810	94, 83, 83, 82, 82	ATL8C31022:1644..62	0.74					
153461	ATU015401	ATL8C15810:540..1345	gap2	ATCEA4S31806, ATCEA4S31802	94, 91	ATL8C15810:662..1345	0.74					
153462	ATU015402	ATL8C19249:258..819	gap2	ATCEA4S32920	94	ATL8C19249:258..620	0.74					
153463	ATU015403	ATL8C13131:719..2501	gap2	ATCEA4S2816, ATCEA4C9739_1	94, 91	ATL8C13131:735..2501	0.74					
153464	ATU015404	ATL8S2651:226..1	gap2	ATCEA4S35652	94	ATL8S2651:126..26	0.73					
153465	ATU015405	ATL8C45039:261..1702	gap2	ATCEA4C4940_2, ATCEA4	94, 91	ATL8C45039:420..1524	0.73					

				C4940_1								
153466	ATU015406	ATL8S10128:52..267	gap2	ATCEA4C24300_1	94	ATL8S10128:164..267	0.73					
153467	ATU015407	ATL8C47645:1036..100	gap2	ATCEA4C48793_1	94	ATL8C47645:1036..290	0.73					
153468	ATU015408	ATL8C35182:94..1117	gap2	ATCEA4C126554_1, ATCEA4S27988	94, 88	ATL8C35182:94..910	0.73					
153469	ATU015409	ATL8C27024:1760..578	gap2	ATCEA4C6813_1	94	ATL8C27024:1700..578	0.73					
153470	ATU015410	ATL8C45442:1210..1	gap2	ATCEA4S19883, ATCEA4C662761	94, 94	ATL8C45442:1150..417	0.73					
153471	ATU015411	ATL8C38075:166..947	gap2	ATCEA4C1341_1, ATCEA4S28923, ATCEA4S28894, ATCEA4S28905, ATCEA4S28907	94, 93, 93, 88, 86	ATL8C38075:367..947	0.73					
153472	ATU015412	ATL8C37717:1588..11	gap2	ATCEA4C29610_1	94	ATL8C37717:1522..11	0.73					
153473	ATU015	ATL8C3	gap2	ATCEA4	93,	ATL8C3	0.72	g45862	100	4220	7.0e-	(AL049

	413	1162:358..5171		C46204_1, ATCEA4S2332, ATCEA4C46204_2	87, 86	1162:358..4880		54			308	640) auxilin-like protein [Arabidopsis thaliana]
153474	ATU015414	ATL8C33432:799..1271	gap2	ATCEA4S10425	94	ATL8C33432:827..1271	0.72					
153475	ATU015415	ATL8C33647:269..2087	gap2	ATCEA4S34538	93	ATL8C33647:269..2087	0.72	g130718, g4455258	100, 55	574, 328	9.7e-59, 5.5e-58	ACID PHOSPHATASE PRECURSOR 1 [Lycopersicon esculentum]; (AL035523) acid phosphatase-like protein [Arabidopsis thaliana]
153476	ATU015416	ATL8C47933:1807..9	gap2	ATCEA4S31199, ATCEA4S35049	94, 92	ATL8C47933:1807..121	0.72					
153477	ATU015417	ATL8C37196:2723..27	gap2	ATCEA4C5278_1	94	ATL8C37196:2316..27	0.72					

153478	ATU0154 18	ATL8C36710:175..989	gap2	ATCEA4S34997, ATCEA4S24809	94, 90	ATL8C36710:290..887	0.72					
153479	ATU0154 19	ATL8C44069:571..791	gap2	ATCEA4S638	94	ATL8C44069:571..791	0.72					
153480	ATU0154 20	ATL8C28931:591..66	gap2	ATCEA4C27953_1	94	ATL8C28931:410..66	0.72					
153481	ATU0154 21	ATL8C19214:1116..16	gap2	ATCEA4S34633	94	ATL8C19214:1025..16	0.72					
153482	ATU0154 22	ATL8C19638:1971..283	gap2	ATCEA4C118939_1, ATCEA4S27003, ATCEA4C33832_1, ATCEA4S32811	94, 93, 89, 89	ATL8C19638:1941..604	0.71					
153483	ATU0154 23	ATL8C37838:1..393	gap2	ATCEA4C76505_1	94	ATL8C37838:289..393	0.71					
153484	ATU0154 24	ATL8C22363:106..432	gap2	ATCEA4C126268_1	94	ATL8C22363:106..265	0.71					
153485	ATU0154 25	ATL8C42796:2734..1	gap2	ATCEA4C33944_1, ATCEA4S32937	94, 89	ATL8C42796:2734..172	0.71					
153486	ATU0154 26	ATL8C34621:79..1491	gap2	ATCEA4C4527_1, ATCEA4	94, 91, 88	ATL8C34621:143..1405	0.70					

				C4527_2, ATCEA4S420								
153487	ATU015427	ATL8C33435:372..1	gap2	ATCEA4S4023	94	ATL8C33435:372..245	0.70					
153488	ATU015428	ATL8C22173:266..1043	gap2	ATCEA4C150594_1	94	ATL8C22173:266..824	0.70					
153489	ATU015429	ATL8C23183:82..697	gap2	ATCEA4S11173	94	ATL8C23183:236..606	0.70					
153490	ATU015430	ATL8S14777:491..145	gap2	ATCEA4C112384_2	94	ATL8S14777:258..145	0.70					
153491	ATU015431	ATL8C2993:870..1933	gap2	ATCEA4S2446	94	ATL8C2993:917..1933	0.70					
153492	ATU015432	ATL8C13609:1675..711	gap2	ATCEA4C84285_1	94	ATL8C13609:1675..933	0.69					
153493	ATU015433	ATL8C13231:641..1179	gap2	ATCEA4S33400	94	ATL8C13231:1136..931	0.69					
153494	ATU015434	ATL8C30473:1173..30	gap2	ATCEA4C21830_1, ATCEA4S2683	94, 89	ATL8C30473:1079..30	0.69					
153495	ATU015435	ATL8C5092:1345..1763	gap2	ATCEA4C27744_1	94	ATL8C5092:1395..1721	0.69					
153496	ATU015436	ATL8C25699:3589..1	gap2	ATCEA4S31250	94	ATL8C25699:3589..3	0.69					

						81						
153497	ATU015437	ATL8C45185:225..1442	gap2	ATCEA4C5515_1	94	ATL8C45185:664..1365	0.69					
153498	ATU015438	ATL8C44519:127..798	gap2	ATCEA4C12344_1, ATCEA4S4287	94, 88	ATL8C44519:163..476	0.69					
153499	ATU015439	ATL8C41153:310..1	gap2	ATCEA4S383	94	ATL8C41153:290..154	0.69					
153500	ATU015440	ATL8C45629:228..1	gap2	ATCEA4S1309	94	ATL8C45629:228..192	0.69					
153501	ATU015441	ATL8C13273:909..493	gap2	ATCEA4C47892_1, ATCEA4S9740	94, 90	ATL8C13273:869..514	0.68					
153502	ATU015442	ATL8C1401:856..1	gap2	ATCEA4C1071_3, ATCEA4S32751, ATCEA4C1071_13, ATCEA4S32566	93, 93, 92, 91	ATL8C1401:772..38	0.68	g4454014	100	386	3.1e-36	(AL035396) putative protein [Arabidopsis thaliana]
153503	ATU015443	ATL8C22439:1205..149	gap2	ATCEA4S6164	94	ATL8C22439:1184..149	0.68					
153504	ATU015444	ATL8S1118:284..1	gap2	ATCEA4S2476	94	ATL8S1118:168..94	0.68					
153505	ATU015445	ATL8C6188:119..238	gap2	ATCEA4C92900_1,	94, 93	ATL8C6188:119..200	0.68					

		3		ATCEA4S34805		6						
153506	ATU015446	ATL8C19589:1..1469	gap2	ATCEA4C123150_1	94	ATL8C19589:46..1469	0.67					
153507	ATU015447	ATL8C16330:158..1481	gap2	ATCEA4S3664	94	ATL8C16330:158..1481	0.67					
153508	ATU015448	ATL8C3326:1..1823	gap2	ATCEA4C641211	94	ATL8C3326:86..1823	0.67					
153509	ATU015449	ATL8S28975:344..72	gap2	ATCEA4S26146	94	ATL8S28975:212..72	0.67					
153510	ATU015450	ATL8S5208:1..572	gap2	ATCEA4S36284	94	ATL8S5208:258..450	0.67					
153511	ATU015451	ATL8C8496:755..2763	gap2	ATCEA4C119463_1	93	ATL8C8496:755..2707	0.67	g2980788	100	1062	4.8e-89	(AL022197) putative protein [Arabidopsis thaliana]
153512	ATU015452	ATL8C2460:1677..1	gap2	ATCEA4S34731, ATCEA4S27162	94, 89	ATL8C2460:1390..223	0.67					
153513	ATU015453	ATL8C24876:2336..231	gap2	ATCEA4S178, ATCEA4S253, ATCEA4S344	93, 88, 87	ATL8C24876:2287..231	0.67	g4038066	100	802	3.7e-54	(AC005897) hypothetical protein [Arabidopsis thaliana]

153514	ATU0154 54	ATL8C20801:1688..1287	gap2	ATCEA4C33248_1	94	ATL8C20801:1603..1287	0.66					
153515	ATU0154 55	ATL8C22132:803..1	gap2	ATCEA4C45330_1, ATCEA4C340131	94, 83	ATL8C22132:583..481	0.66					
153516	ATU0154 56	ATL8C44837:1463..265	gap2	ATCEA4S34765, ATCEA4C220621	94, 93	ATL8C44837:1081..713	0.66					
153517	ATU0154 57	ATL8C37733:97..1421	gap2	ATCEA4C35414_1	94	ATL8C37733:529..1421	0.66					
153518	ATU0154 58	ATL8C45738:3711..1671	gap2	ATCEA4S33080, ATCEA4S35368	94, 90	ATL8C45738:3444..1788	0.66					
153519	ATU0154 59	ATL8C14891:149..473	gap2	ATCEA4C34035_1	94	ATL8C14891:160..267	0.65					
153520	ATU0154 60	ATL8S30208:231..1	gap2	ATCEA4C8193_1, ATCEA4S2873	94, 87	ATL8S30208:231..5	0.65					
153521	ATU0154 61	ATL8C12588:1..1691	gap2	ATCEA4C18532_1, ATCEA4C18532_3, ATCEA4S7772, ATCEA4C18532	94, 88, 87, 85	ATL8C12588:403..1363	0.65					

				2								
153522	ATU015462	ATL8C37018:657..407	gap2	ATCEA4C117796_1	94	ATL8C37018:657..412	0.65					
153523	ATU015463	ATL8C34932:682..1873	gap2	ATCEA4S5240, ATCEA4S5354	94, 92	ATL8C34932:1050..1873	0.65					
153524	ATU015464	ATL8C30574:102..560	gap2	ATCEA4S10883	94	ATL8C30574:116..188	0.65					
153525	ATU015465	ATL8C23434:2789..2063	gap2	ATCEA4C42331_1	94	ATL8C23434:2789..2063	0.65					
153526	ATU015466	ATL8C21538:877..225	gap2	ATCEA4C9955_1	94	ATL8C21538:651..225	0.65					
153527	ATU015467	ATL8C12321:1301..143	gap2	ATCEA4C4977_2, ATCEA4C4977_1	94, 93	ATL8C12321:1044..145	0.65					
153528	ATU015468	ATL8C29357:518..915	gap2	ATCEA4S30469	94	ATL8C29357:560..706	0.65					
153529	ATU015469	ATL8C48373:72..1686	gap2	ATCEA4S2147	94	ATL8C48373:72..1686	0.64					
153530	ATU015470	ATL8C37680:259..1264	gap2	ATCEA4S1173	94	ATL8C37680:373..1264	0.64					
153531	ATU015471	ATL8C30865:188..92	gap2	ATCEA4C557471	94	ATL8C30865:188..92	0.64					
153532	ATU015472	ATL8C9865:63	gap2	ATCEA4C44526	94, 91	ATL8C9865:89	0.64					

		7..242 8		_1, ATCEA4 C15810 2_1		0..226 7						
153533	ATU015 473	ATL8C3 6199:8 17..31 1	gap2	ATCEA4 C22572 _1	94	ATL8C3 6199:6 04..31 1	0.64					
153534	ATU015 474	ATL8C2 3062:1 103..1 266	gap2	ATCEA4 C12085 1_1	94	ATL8C2 3062:1 115..1 264	0.63					
153535	ATU015 475	ATL8C4 7161:3 791..3 291	gap2	ATCEA4 C11644 2_1	94	ATL8C4 7161:3 791..3 292	0.63					
153536	ATU015 476	ATL8C1 5736:1 23..64 4	gap2	ATCEA4 S33113	94	ATL8C1 5736:1 23..61 6	0.63					
153537	ATU015 477	ATL8C1 7900:5 83..7	gap2	ATCEA4 S35093	94	ATL8C1 7900:3 35..13 1	0.63					
153538	ATU015 478	ATL8C3 8070:4 61..14 15	gap2	ATCEA4 C21795 _1	94	ATL8C3 8070:4 61..13 22	0.63					
153539	ATU015 479	ATL8C2 6999:1 085..2 02	gap2	ATCEA4 S14025	94	ATL8C2 6999:1 085..2 02	0.63					
153540	ATU015 480	ATL8C4 5189:6 56..14 15	gap2	ATCEA4 S2826	94	ATL8C4 5189:6 56..14 15	0.62					
153541	ATU015 481	ATL8C4 488:1. .679	gap2	ATCEA4 C74210 _2, ATCEA4 S26859 , ATCEA4 C74210	94, 93, 91	ATL8C4 488:30 ..611	0.62					

				1								
153542	ATU0154 82	ATL8C30 646:1 319..1	gap2	ATCEA4C8166_1, ATCEA4S10507	94, 86	ATL8C30 646:1 059..1 68	0.62					
153543	ATU0154 83	ATL8C25 910:7 ..853	gap2	ATCEA4C5484_1	94	ATL8C25 910:7 2..721	0.62					
153544	ATU0154 84	ATL8C23 37:591 ..1105	gap2	ATCEA4S26136	94	ATL8C23 37:591 ..1047	0.62					
153545	ATU0154 85	ATL8C33 138:8 85..45	gap2	ATCEA4S10440, ATCEA4C71407_1	94, 89	ATL8C33 138:7 90..45	0.61					
153546	ATU0154 86	ATL8C28 585:3 3..651	gap2	ATCEA4S11104	94	ATL8C28 585:1 52..258	0.61					
153547	ATU0154 87	ATL8C43 332:8 0..467	gap2	ATCEA4C32445_1, ATCEA4S29967	94, 84	ATL8C43 332:8 2..273	0.61					
153548	ATU0154 88	ATL8C59 81:53 6..82	gap2	ATCEA4S30911, ATCEA4S840	94, 82	ATL8C59 81:49 6..148	0.61					
153549	ATU0154 89	ATL8C48 09:23 71..10 98	gap2	ATCEA4S34928, ATCEA4C92563_1	94, 90	ATL8C48 09:20 30..19 41	0.61					
153550	ATU0154 90	ATL8C25 620:2 46..69 5	gap2	ATCEA4S1907	94	ATL8C25 620:2 46..58 7	0.61					
153551	ATU015	ATL8C9	gap2	ATCEA4	93	ATL8C9	0.61	g30803	100	1764	2.3e-	(AL022

	491	384:543..3493		S31434		384:543..3493		54			171	580) hypothetical protein [Arabidopsis thaliana]
153552	ATU015492	ATL8C23081:3766..187	gap2	ATCEA4S26307, ATCEA4S5316, ATCEA4C8272_1	94, 94, 93	ATL8C23081:3669..187	0.60					
153553	ATU015493	ATL8C2918:849..279	gap2	ATCEA4S36364	94	ATL8C2918:728..516	0.60					
153554	ATU015494	ATL8C17588:666..65	gap2	ATCEA4S33294	94	ATL8C17588:666..376	0.60					
153555	ATU015495	ATL8C13575:532..994	gap2	ATCEA4C4091_1	94	ATL8C13575:543..709	0.59					
153556	ATU015496	ATL8C61:5098..3469	gap2	ATCEA4S3241	93	ATL8C61:4815..3469	0.59	g1871185	100	1188	2.3e-121	(U90439) seven in absentia isolog [Arabidopsis thaliana]
153557	ATU015497	ATL8C15696:2004..2767	gap2	ATCEA4C119288_1	94	ATL8C15696:2004..2767	0.58					
153558	ATU015	ATL8C2	gap2	ATCEA4	94, 91	ATL8C2	0.58					

	498	4661:1319..1		S30184, ATCEA4C66887_1		4661:1318..407						
153559	ATU015499	ATL8C42090:102..547	gap2	ATCEA4C120821_1	94	ATL8C42090:102..499	0.57					
153560	ATU015500	ATL8C42059:292..1357	gap2	ATCEA4S13389, ATCEA4S32909	94, 87	ATL8C42059:292..577	0.57					
153561	ATU015501	ATL8C6759:1..739	gap2	ATCEA4C24051_1, ATCEA4S31500	94, 83	ATL8C6759:202..261	0.57					
153562	ATU015502	ATL8C11601:9576..5178	gap2	ATCEA4S1006	93	ATL8C11601:9576..5178	0.57	g4263063	100	2571	5.9e-228	(AC005142) hypothetical protein [Arabidopsis thaliana]
153563	ATU015503	ATL8S7782:385..1	gap2	ATCEA4C11870_1	94	ATL8S7782:273..14	0.57					
153564	ATU015504	ATL8C31477:45..281	gap2	ATCEA4C10089_1, ATCEA4S16929	94, 82	ATL8C31477:87..275	0.57					
153565	ATU015505	ATL8C36282:2110..896	gap2	ATCEA4S23397	94	ATL8C36282:2110..1078	0.56					
153566	ATU015506	ATL8C10062:246..17	gap2	ATCEA4S1534, ATCEA4	94, 93	ATL8C10062:246..11	0.56					

		03		S30635		10						
153567	ATU015507	ATL8C21696:2955..1	gap2	ATCEA4S178, ATCEA4S253	93, 87	ATL8C21696:2955..203	0.56	g4038066, g4038061	100, 38	729, 377	1.1e-49, 5.4e-38	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AC005897) similar to leucine zipper transcription factors [Arabidopsis thaliana]
153568	ATU015508	ATL8S4347:1..658	gap2	ATCEA4C44_1, ATCEA4S26944	94, 86	ATL8S4347:91..490	0.56					
153569	ATU015509	ATL8C18918:106..1255	gap2	ATCEA4C706_1	94	ATL8C18918:106..1230	0.55					
153570	ATU015510	ATL8C42475:332..1	gap2	ATCEA4C1932_1	94	ATL8C42475:332..20	0.55					
153571	ATU015511	ATL8S914:583..1	gap2	ATCEA4S26533	94	ATL8S914:583..130	0.55					
153572	ATU015512	ATL8S28349:641..25	gap2	ATCEA4C2316_1,	94, 85	ATL8S28349:486..32	0.54					

		9		ATCEA4S5258		5						
153573	ATU015513	ATL8C39115:626..1	gap2	ATCEA4S36105	94	ATL8C39115:596..97	0.54					
153574	ATU015514	ATL8C49524:153..931	gap2	ATCEA4C526_1	94	ATL8C49524:295..558	0.54					
153575	ATU015515	ATL8C32057:3443..2674	gap2	ATCEA4C16483_1	94	ATL8C32057:3342..2893	0.54					
153576	ATU015516	ATL8C18891:700..45	gap2	ATCEA4C34612_1	94	ATL8C18891:644..45	0.53					
153577	ATU015517	ATL8C22854:633..254	gap2	ATCEA4S34029	94	ATL8C22854:533..254	0.53					
153578	ATU015518	ATL8C33207:1642..198	gap2	ATCEA4S2167, ATCEA4S30964	93, 83	ATL8C33207:1642..198	0.53	g4538911	100	621	1.3e-32	(AL049482) hypothetical protein [Arabidopsis thaliana]
153579	ATU015519	ATL8C4517:382..695	gap2	ATCEA4C4787_2, ATCEA4S14111, ATCEA4S26584	94, 91, 83	ATL8C4517:532..559	0.53					
153580	ATU015520	ATL8C30715:1519..169	gap2	ATCEA4S4111	94	ATL8C30715:1306..169	0.53					
153581	ATU015521	ATL8C31431:2	gap2	ATCEA4C11547	94	ATL8C31431:2	0.53					

		23..2118		6_1		23..2118						
153582	ATU015522	ATL8C28700:1213..30	gap2	ATCEA4S4054	94	ATL8C28700:1213..30	0.53					
153583	ATU015523	ATL8C12353:2163..152	gap2	ATCEA4S778	94	ATL8C12353:2163..152	0.53					
153584	ATU015524	ATL8C11496:315..1466	gap2	ATCEA4C107433_1, ATCEA4S20307	94, 83	ATL8C11496:315..1000	0.52					
153585	ATU015525	ATL8C19677:1280..517	gap2	ATCEA4S33344, ATCEA4S30996, ATCEA4S26042	94, 85, 83	ATL8C19677:1234..603	0.52					
153586	ATU015526	ATL8C13550:8418..19047	gap2	ATCEA4S33179, ATCEA4S27666	93, 91	ATL8C13550:9052..19047	0.52	g4432807, g4263062	100, 100	7687, 392	0.0, 2.0e-37	(AC006570) putative polyprotein [Arabidopsis thaliana]; (AC005142) hypothetical protein [Arabidopsis thaliana]
153587	ATU015	ATL8S7	gap2	ATCEA4	94	ATL8S7	0.52					

	527	435:79..465		C94132_1		435:124..273						
153588	ATU0155528	ATL8C9566:2437..105	gap2	ATCEA4C6063_1, ATCEA4C6063_2, ATCEA4S16566, ATCEA4S1985	94, 94, 84, 82	ATL8C9566:105..2437	0.51					
153589	ATU0155529	ATL8C45595:817..1116	gap2	ATCEA4C28421_2	94	ATL8C45595:836..1086	0.51					
153590	ATU0155530	ATL8C14048:72..8793	gap2	ATCEA4S27369, ATCEA4S344, ATCEA4S253, ATCEA4S178, ATCEA4S27399	93, 89, 88, 87, 85	ATL8C14048:7484..8793, ATL8C14048:72..7186	0.51, 0.74	g4038066, g4773908, g4567296	100, 91, 32	701, 2866, 260	4.9e-27, 2.4e-254, 7.0e-20	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]; (AC006918) putative Athila retroelement

												ORF1 protein [Arabidopsis thaliana]
153591	ATU015531	ATL8C29826:1367..687	gap2	ATCEA4C119498_1	94	ATL8C29826:1367..1204	0.50					
153592	ATU015532	ATL8C27358:772..1	gap2	ATCEA4S29620, ATCEA4S34685	94, 91	ATL8C27358:715..87	0.50					
153593	ATU015533	ATL8S25765:1..414	gap2	ATCEA4C44055_1	94	ATL8S25765:32..353	0.50					
153594	ATU015534	ATL8S4732:521..1	gap2	ATCEA4C16954_1	94	ATL8S4732:383..213	0.50					
153595	ATU015535	ATL8C42178:1163..1365	gap2	ATCEA4C16951_1	94	ATL8C42178:1347..1172	0.49					
153596	ATU015536	ATL8C3126:991..784	gap2	ATCEA4C40365_1	94	ATL8C3126:918..784	0.49					
153597	ATU015537	ATL8C47495:1058..347	gap2	ATCEA4C12706_1, ATCEA4S6793	94, 91	ATL8C47495:1043..347	0.49					
153598	ATU015538	ATL8C32516:837..117	gap2	ATCEA4C38845_1	94	ATL8C32516:837..565	0.49					
153599	ATU015539	ATL8C26515:1..796	gap2	ATCEA4S11939	94	ATL8C26515:283..356	0.49					
153600	ATU015540	ATL8C34308:4	gap2	ATCEA4S12638	94	ATL8C34308:7	0.49					

		23..1183				47..1183						
153601	ATU0155 41	ATL8C28285:320..716	gap2	ATCEA4C43833_1	94	ATL8C28285:320..668	0.49					
153602	ATU0155 42	ATL8C34962:87..941	gap2	ATCEA4S33609	94	ATL8C34962:87..805	0.49					
153603	ATU0155 43	ATL8C1185:12..540	gap2	ATCEA4S3804	94	ATL8C1185:401..540	0.49					
153604	ATU0155 44	ATL8C27441:173..762	gap2	ATCEA4S35185, ATCEA4C80566_1	94, 92	ATL8C27441:336..662	0.48					
153605	ATU0155 45	ATL8C47040:1189..788	gap2	ATCEA4S33889	94	ATL8C47040:1189..1086	0.48					
153606	ATU0155 46	ATL8C32856:98..502	gap2	ATCEA4S32108	94	ATL8C32856:98..502	0.48					
153607	ATU0155 47	ATL8C21723:37..790	gap2	ATCEA4S253	94	ATL8C21723:126..790	0.48					
153608	ATU0155 48	ATL8C49772:739..1300	gap2	ATCEA4C6901_1	94	ATL8C49772:824..1021	0.47					
153609	ATU0155 49	ATL8C17621:721..1	gap2	ATCEA4C11732_1	94	ATL8C17621:349..96	0.47					
153610	ATU0155 50	ATL8S13140:372..779	gap2	ATCEA4C74198_1	94	ATL8S13140:559..659	0.47					
153611	ATU0155 51	ATL8C7333:792..1450	gap2	ATCEA4S34860	94	ATL8C7333:844..1028	0.47					

153612	ATU0155552	ATL8C44565:1..682	gap2	ATCEA4C760_2, ATCEA4S34904	94, 84	ATL8C44565:51..478	0.46					
153613	ATU0155553	ATL8C44641:571..1262	gap2	ATCEA4C23413_1	94	ATL8C44641:644..1262	0.46					
153614	ATU0155554	ATL8S21532:705..311	gap2	ATCEA4C16607_1	94	ATL8S21532:699..311	0.46					
153615	ATU0155555	ATL8C23668:251..1216	gap2	ATCEA4S34719	94	ATL8C23668:251..1216	0.46					
153616	ATU0155556	ATL8C5816:1..1397	gap2	ATCEA4S6638, ATCEA4S32840, ATCEA4S31286	94, 93, 89	ATL8C5816:121..1150	0.46					
153617	ATU0155557	ATL8C25079:542..5	gap2	ATCEA4C18544_1	94	ATL8C25079:542..5	0.46					
153618	ATU0155558	ATL8C25112:1424..291	gap2	ATCEA4C40282_1	94	ATL8C25112:1028..906	0.46					
153619	ATU0155559	ATL8S18568:628..1	gap2	ATCEA4C921_1	94	ATL8S18568:507..85	0.46					
153620	ATU0155560	ATL8S632:453..241	gap2	ATCEA4C1782_1, ATCEA4S5892	94, 94	ATL8S632:401..243	0.45					
153621	ATU0155561	ATL8C42729:1408..216	gap2	ATCEA4C31527_1	94	ATL8C42729:1408..226	0.45					
153622	ATU015	ATL8S2	gap2	ATCEA4	94, 87	ATL8S2	0.45					

	562	2012:1..478		C14011_1, ATCEA4C14011_3		2012:294..179						
153623	ATU015563	ATL8S10517:148..534	gap2	ATCEA4C5648_1, ATCEA4S9964, ATCEA4S9959	94, 88, 82	ATL8S10517:426..163	0.45					
153624	ATU015564	ATL8C40569:928..422	gap2	ATCEA4C17369_1	94	ATL8C40569:928..522	0.45					
153625	ATU015565	ATL8C49428:472..1003	gap2	ATCEA4C71919_1	94	ATL8C49428:481..965	0.44					
153626	ATU015566	ATL8C14967:107..683	gap2	ATCEA4C18848_1	94	ATL8C14967:285..676	0.44					
153627	ATU015567	ATL8C25170:1070..60	gap2	ATCEA4C119717_1, ATCEA4S25655, ATCEA4S25656	94, 87, 83	ATL8C25170:1050..60	0.44					
153628	ATU015568	ATL8C40058:866..4	gap2	ATCEA4S5662	94	ATL8C40058:866..296	0.43					
153629	ATU015569	ATL8C35560:788..1208	gap2	ATCEA4C30832_1	94	ATL8C35560:1208..788	0.43					
153630	ATU015570	ATL8C23808:831..1	gap2	ATCEA4C29322_1	94	ATL8C23808:307..259	0.43					

153631	ATU0155571	ATL8C21376:1311..559	gap2	ATCEA4S34696	94	ATL8C21376:1266..862	0.43					
153632	ATU0155572	ATL8C45700:1446..1	gap2	ATCEA4C48599_1, ATCEA4S25816	94, 87	ATL8C45700:1446..585	0.43					
153633	ATU0155573	ATL8C39708:1209..21	gap2	ATCEA4C32199_1	94	ATL8C39708:1028..21	0.43					
153634	ATU0155574	ATL8C35009:432..855	gap2	ATCEA4C14719_1	94	ATL8C35009:554..854	0.43					
153635	ATU0155575	ATL8C5345:632..1	gap2	ATCEA4S12828, ATCEA4S321	94, 92	ATL8C5345:473..416	0.42					
153636	ATU0155576	ATL8C47001:260..2157	gap2	ATCEA4C48483_1	94	ATL8C47001:260..2157	0.42					
153637	ATU0155577	ATL8S2371:389..1	gap2	ATCEA4C2848_1	94	ATL8S2371:389..153	0.42					
153638	ATU0155578	ATL8C17497:1..1764	gap2	ATCEA4C4208_1, ATCEA4S34467	94, 93	ATL8C17497:1091..1764	0.42					
153639	ATU0155579	ATL8C14741:1584..87	gap2	ATCEA4C53750_3, ATCEA4C53750_4, ATCEA4S7513	94, 93, 83	ATL8C14741:1584..89	0.41					
153640	ATU0155580	ATL8C20777:1	gap2	ATCEA4C43047	94	ATL8C20777:5	0.41					

		..1100		_1		69..1100						
153641	ATU015581	ATL8C30231:48..861	gap2	ATCEA4C116163_1	94	ATL8C30231:48..861	0.41					
153642	ATU015582	ATL8C44318:57..425	gap2	ATCEA4S34372	94	ATL8C44318:161..425	0.41					
153643	ATU015583	ATL8C13810:647..952	gap2	ATCEA4C8059_1	94	ATL8C13810:784..924	0.41					
153644	ATU015584	ATL8C45388:178..537	gap2	ATCEA4C110786_1	94	ATL8C45388:527..307	0.40					
153645	ATU015585	ATL8C23335:3674..7142	gap2	ATCEA4S35078, ATCEA4S31255	93, 92	ATL8C23335:3674..6331	0.40	g4741187	100	935	3.9e-107	(AL049746) putative protein [Arabidopsis thaliana]
153646	ATU015586	ATL8C50079:56..231	gap2	ATCEA4S35740	94							
153647	ATU015587	ATL8S15985:471..328	gap2	ATCEA4S32906	94							
153648	ATU015588	ATL8C24715:1546..1907	gap2	ATCEA4C120285_1, ATCEA4C251_4	94, 92							
153649	ATU015589	ATL8C20927:396..666	gap2	ATCEA4S14501, ATCEA4S13881	94, 93, 89							

				, ATCEA4 S13768								
153650	ATU015590	ATL8C50170:2725..2628	gap2	ATCEA4 S3968	94							
153651	ATU015591	ATL8C27231:342..591	gap2	ATCEA4 C117137_1	94							
153652	ATU015592	ATL8C15918:172..631	gap2	ATCEA4 C134132_1	94							
153653	ATU015593	ATL8C50232:1031..1439	gap2	ATCEA4 S14458	94							
153654	ATU015594	ATL8C9828:71..508	gap2	ATCEA4 S6466	94							
153655	ATU015595	ATL8C50244:741..1295	gap2	ATCEA4 S16862	94							
153656	ATU015596	ATL8C24516:11..475	gap2	ATCEA4 S7234	94							
153657	ATU015597	ATL8C35855:334..900	gap2	ATCEA4 C103842_1, ATCEA4 S16873	94, 86							
153658	ATU015598	ATL8C32962:494..164	gap2	ATCEA4 S26253, ATCEA4 S26249	94, 91							
153659	ATU015599	ATL8C13641:658..1081	gap2	ATCEA4 S27132	94							
153660	ATU015	ATL8C2	gap2	ATCEA4	94							

	600	4497:389..1		C110454_1								
153661	ATU015601	ATL8C3855:314..1	gap2	ATCEA4S4506	94							
153662	ATU015602	ATL8C11739:1648..1396	gap2	ATCEA4C1341_1	94							
153663	ATU015603	ATL8C6096:288..1	gap2	ATCEA4C21894_1	94							
153664	ATU015604	ATL8C12661:975..125	gap2	ATCEA4S5923, ATCEA4S31016, ATCEA4C22733_1	94, 91, 87							
153665	ATU015605	ATL8C5374:4149..4223	gap2	ATCEA4S26374	94							
153666	ATU015606	ATL8C35847:472..1024	gap2	ATCEA4C101540_1, ATCEA4S24854, ATCEA4S26290	94, 94, 83							
153667	ATU015607	ATL8S4062:452..1	gap2	ATCEA4C7318_1, ATCEA4C7318_2	94, 89							
153668	ATU015608	ATL8C12645:744..1179	gap2	ATCEA4S31163, ATCEA4S33855	94, 91							
153669	ATU015	ATL8C2	gap2	ATCEA4	94							

	609	4152:1684..2184		C53534_1								
153670	ATU015610	ATL8C24149:1364..1816	gap2	ATCEA4S31974, ATCEA4S25231	94, 86							
153671	ATU015611	ATL8C3851:1709..1967	gap2	ATCEA4C27573_1	94							
153672	ATU015612	ATL8C12628:3150..3000	gap2	ATCEA4C22484_1	94							
153673	ATU015613	ATL8C36627:1..247	gap2	ATCEA4S14401, ATCEA4C71246_1	94, 84							
153674	ATU015614	ATL8C3331:57..1	gap2	ATCEA4S11130	94							
153675	ATU015615	ATL8C5542:190..1	gap2	ATCEA4S1933	94							
153676	ATU015616	ATL8S16493:272..1	gap2	ATCEA4S25154	94							
153677	ATU015617	ATL8C15758:156..1	gap2	ATCEA4S8755	94							
153678	ATU015618	ATL8C15756:738..859	gap2	ATCEA4C5428_1	94							
153679	ATU015619	ATL8C26120:593..1	gap2	ATCEA4C9453_1	94							
153680	ATU015620	ATL8C24048:107..1	gap2	ATCEA4S15403	94							

153681	ATU015621	ATL8C776:353..102	gap2	ATCEA4S29642, ATCEA4S20383	94, 92							
153682	ATU015622	ATL8C15717:422..1	gap2	ATCEA4C103751_1	94							
153683	ATU015623	ATL8C19444:2257..1922	gap2	ATCEA4C42561_1	94							
153684	ATU015624	ATL8C1600:2579..3166	gap2	ATCEA4C42561_1	94							
153685	ATU015625	ATL8S1678:559..670	gap2	ATCEA4S30967	94							
153686	ATU015626	ATL8C9911:1506..1359	gap2	ATCEA4S13588	94							
153687	ATU015627	ATL8S6237:1..275	gap2	ATCEA4C69700_1, ATCEA4S27089	94, 86							
153688	ATU015628	ATL8C23948:834..1054	gap2	ATCEA4C107575_1	94							
153689	ATU015629	ATL8C5681:790..185	gap2	ATCEA4S35681	94							
153690	ATU015630	ATL8C2393:1216..1770	gap2	ATCEA4C38747_1	94							
153691	ATU015631	ATL8C23852:459..1	gap2	ATCEA4S25187	94							
153692	ATU015632	ATL8C2384:21	gap2	ATCEA4S31601	94							

		8..433										
153693	ATU015633	ATL8C18686:898..1198	gap2	ATCEA4C6831_3	94							
153694	ATU015634	ATL8C9941:1678..2282	gap2	ATCEA4S28057	94							
153695	ATU015635	ATL8C37740:524..1	gap2	ATCEA4C21008_1	94							
153696	ATU015636	ATL8C12559:2920..2636	gap2	ATCEA4C2100_1	94							
153697	ATU015637	ATL8C6521:1403..655	gap2	ATCEA4C119152_1, ATCEA4S32977	94, 85							
153698	ATU015638	ATL8C15951:508..217	gap2	ATCEA4C40524_2, ATCEA4C40524_1, ATCEA4S31509	94, 93, 92							
153699	ATU015639	ATL8C33259:2554..2978	gap2	ATCEA4S3769	94							
153700	ATU015640	ATL8S12955:422..1	gap2	ATCEA4C45355_1, ATCEA4S5284	94, 85							
153701	ATU015641	ATL8S16915:1..176	gap2	ATCEA4S4723	94							
153702	ATU015642	ATL8C33223:1099..1	gap2	ATCEA4C40640_1	94							

		204										
153703	ATU015643	ATL8C3076:867..472	gap2	ATCEA4S30314, ATCEA4S25846, ATCEA4S24117	94, 87, 85							
153704	ATU015644	ATL8C1864:1324..846	gap2	ATCEA4C67948_1	94							
153705	ATU015645	ATL8S7435:1..108	gap2	ATCEA4S23774	94							
153706	ATU015646	ATL8C23777:3197..2934	gap2	ATCEA4S26509	94							
153707	ATU015647	ATL8S24058:115..1	gap2	ATCEA4C39277_1	94							
153708	ATU015648	ATL8C37791:4526..4919	gap2	ATCEA4S3086, ATCEA4C75319_2	94, 91							
153709	ATU015649	ATL8C5828:2310..2564	gap2	ATCEA4S16416	94							
153710	ATU015650	ATL8C5830:1701..2145	gap2	ATCEA4S23472	94							
153711	ATU015651	ATL8C5833:3703..3567	gap2	ATCEA4C22385_1	94							
153712	ATU015652	ATL8C2371:244..1	gap2	ATCEA4S33123	94							
153713	ATU015	ATL8S1	gap2	ATCEA4	94							

	653	7056:399..533		C19156_1								
153714	ATU015654	ATL8C18496:630..1034	gap2	ATCEA4C33537_1	94							
153715	ATU015655	ATL8C34573:961..1153	gap2	ATCEA4C105825_1	94							
153716	ATU015656	ATL8C23635:3382..3263	gap2	ATCEA4S26896	94							
153717	ATU015657	ATL8C35758:2791..3276	gap2	ATCEA4C50685_1	94							
153718	ATU015658	ATL8C18178:255..724	gap2	ATCEA4S26511, ATCEA4S14378	94, 85							
153719	ATU015659	ATL8C23575:350..742	gap2	ATCEA4C120393_1	94							
153720	ATU015660	ATL8C3322:3874..3777	gap2	ATCEA4S26349	94							
153721	ATU015661	ATL8C6028:653..749	gap2	ATCEA4S26114	94							
153722	ATU015662	ATL8S17216:1..161	gap2	ATCEA4S26685	94							
153723	ATU015663	ATL8C23432:735..1083	gap2	ATCEA4S635	94							
153724	ATU015664	ATL8C43339:1	gap2	ATCEA4C1960	94							

		58..352		1								
153725	ATU0156 65	ATL8S17259:1..588	gap2	ATCEA4C30625_1	94							
153726	ATU0156 66	ATL8C35347:156..1	gap2	ATCEA4C19742_1	94							
153727	ATU0156 67	ATL8C61:2611..2213	gap2	ATCEA4S34043	94							
153728	ATU0156 68	ATL8S8266:284..497	gap2	ATCEA4S27131, ATCEA4C51711_1	94, 92							
153729	ATU0156 69	ATL8C11247:305..213	gap2	ATCEA4S35544	94							
153730	ATU0156 70	ATL8C6566:338..689	gap2	ATCEA4C15155_1	94							
153731	ATU0156 71	ATL8C15390:624..512	gap2	ATCEA4S33069	94							
153732	ATU0156 72	ATL8C31364:1..455	gap2	ATCEA4C521_1, ATCEA4S17292	94, 88							
153733	ATU0156 73	ATL8C6194:788..258	gap2	ATCEA4S14744	94							
153734	ATU0156 74	ATL8C23135:189..306	gap2	ATCEA4S23824	94							
153735	ATU0156 75	ATL8C15890:3730..3931	gap2	ATCEA4C23473_1	94							

153736	ATU0156676	ATL8C23079:953..1	gap2	ATCEA4C69563_1	94							
153737	ATU0156677	ATL8C6387:523..453	gap2	ATCEA4S26455	94							
153738	ATU0156678	ATL8C23027:1370..1246	gap2	ATCEA4S19866	94							
153739	ATU0156679	ATL8S1751:320..499	gap2	ATCEA4S3450	94							
153740	ATU0156680	ATL8C2554:1214..813	gap2	ATCEA4C44083_1	94							
153741	ATU0156681	ATL8C49073:683..875	gap2	ATCEA4C57144_1	94							
153742	ATU0156682	ATL8C22764:58..424	gap2	ATCEA4S34330	94							
153743	ATU0156683	ATL8C15353:1426..1541	gap2	ATCEA4S17153, ATCEA4C40104_2	94, 86							
153744	ATU0156684	ATL8C6483:469..904	gap2	ATCEA4S34994	94							
153745	ATU0156685	ATL8C38410:386..799	gap2	ATCEA4S3511	94							
153746	ATU0156686	ATL8C15314:1..230	gap2	ATCEA4S5025	94							
153747	ATU0156687	ATL8C35734:489..1433	gap2	ATCEA4C13306_1	93			g2760322	100	953	3.3e-92	(AC002130) F1N21.7

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153748	ATU015688	ATL8C18381:1..185	gap2	ATCEA4S12226	94							
153749	ATU015689	ATL8C22730:85..460	gap2	ATCEA4C116155_1	94							
153750	ATU015690	ATL8C29434:1..356	gap2	ATCEA4C75383_2, ATCEA4C75383_1	94, 88							
153751	ATU015691	ATL8C35302:3824..3399	gap2	ATCEA4C25279_2	94							
153752	ATU015692	ATL8S17734:14..570	gap2	ATCEA4C8353_1	94							
153753	ATU015693	ATL8C15287:224..1082	gap2	ATCEA4C5771_1	94							
153754	ATU015694	ATL8C28875:847..1596	gap2	ATCEA4C112083_1, ATCEA4S32334	94, 91							
153755	ATU015695	ATL8C6506:640..841	gap2	ATCEA4C21332_1	94							
153756	ATU015696	ATL8C22553:432..641	gap2	ATCEA4S34873	94							
153757	ATU015697	ATL8S10445:433..374	gap2	ATCEA4S16693	94							
153758	ATU015	ATL8C1	gap2	ATCEA4	94							

	698	5232:1492..1649		C12752_1								
153759	ATU015699	ATL8C22503:544..1166	gap2	ATCEA4C1071_4	94							
153760	ATU015700	ATL8C22498:1640..1503	gap2	ATCEA4S253	94							
153761	ATU015701	ATL8C38373:615..732	gap2	ATCEA4C25634_1	94							
153762	ATU015702	ATL8C27686:1621..2056	gap2	ATCEA4C95768_1	94							
153763	ATU015703	ATL8S10547:1..375	gap2	ATCEA4S34796	94							
153764	ATU015704	ATL8C38544:429..100	gap2	ATCEA4C397_1	94							
153765	ATU015705	ATL8C15514:1530..940	gap2	ATCEA4S33805, ATCEA4S28829	94, 83							
153766	ATU015706	ATL8C11094:1..524	gap2	ATCEA4C4942_6, ATCEA4S34688	94, 86							
153767	ATU015707	ATL8C18399:1134..1698	gap2	ATCEA4C2037_2	94							
153768	ATU015708	ATL8S10620:395..191	gap2	ATCEA4S5222	94							

153769	ATU0157 09	ATL8S23725:426..18	gap2	ATCEA4C2094_1, ATCEA4S30270, ATCEA4S25141	94, 94, 91							
153770	ATU0157 10	ATL8C22212:424..712	gap2	ATCEA4S36124	94							
153771	ATU0157 11	ATL8S6138:24..451	gap2	ATCEA4S27237, ATCEA4C74414_1	94, 87							
153772	ATU0157 12	ATL8C4199:1..120	gap2	ATCEA4C358_1	94							
153773	ATU0157 13	ATL8C6699:643..164	gap2	ATCEA4C121565_1	94							
153774	ATU0157 14	ATL8C47187:171..1	gap2	ATCEA4C20392_1	94							
153775	ATU0157 15	ATL8C6896:89..1	gap2	ATCEA4S4191	94							
153776	ATU0157 16	ATL8C692:118..1	gap2	ATCEA4S7762	94							
153777	ATU0157 17	ATL8C36557:602..1	gap2	ATCEA4C2437_1	94							
153778	ATU0157 18	ATL8S10717:78..1	gap2	ATCEA4S35993	94							
153779	ATU0157 19	ATL8C6950:1272..1379	gap2	ATCEA4C117403_1	94							
153780	ATU015	ATL8C4	gap2	ATCEA4	94, 89							

	720	1241:1..269		C53750_1, ATCEA4S7513								
153781	ATU015721	ATL8C13458:332..729	gap2	ATCEA4S14461	94							
153782	ATU015722	ATL8S17126:182..1	gap2	ATCEA4C32583_1	94							
153783	ATU015723	ATL8S17976:348..437	gap2	ATCEA4C95089_1	94							
153784	ATU015724	ATL8S19104:535..1	gap2	ATCEA4C34904_1, ATCEA4S35780	94, 90							
153785	ATU015725	ATL8C12133:2061..1765	gap2	ATCEA4C26848_1	94							
153786	ATU015726	ATL8C7131:104..1	gap2	ATCEA4C6655_1	94							
153787	ATU015727	ATL8C32980:1385..1265	gap2	ATCEA4S30356	94							
153788	ATU015728	ATL8C1733:297..199	gap2	ATCEA4C48408_1	94							
153789	ATU015729	ATL8S22344:563..1	gap2	ATCEA4C14086_1	94							
153790	ATU015730	ATL8C31832:643..333	gap2	ATCEA4S31800	94							
153791	ATU015731	ATL8C7222:2192..18	gap2	ATCEA4S32846	94							

		31										
153792	ATU0157 32	ATL8C18131:874..1511	gap2	ATCEA4S6266	94							
153793	ATU0157 33	ATL8C32958:2513..1931	gap2	ATCEA4C127517_1	94							
153794	ATU0157 34	ATL8C26089:1269..486	gap2	ATCEA4S35235, ATCEA4S29574	94, 93							
153795	ATU0157 35	ATL8C7242:872..637	gap2	ATCEA4S6010	94							
153796	ATU0157 36	ATL8C21659:525..439	gap2	ATCEA4C22583_1	94							
153797	ATU0157 37	ATL8C3182:4138..4597	gap2	ATCEA4S7764	94							
153798	ATU0157 38	ATL8C38265:769..1011	gap2	ATCEA4C533_1	94							
153799	ATU0157 39	ATL8C21656:545..830	gap2	ATCEA4C5821_1	94							
153800	ATU0157 40	ATL8C15499:1540..3807	gap2	ATCEA4S30786, ATCEA4S35186	93, 88			g4895178	100	1101	6.8e-52	(AC007661) hypothetical protein [Arabidopsis thaliana]
153801	ATU015	ATL8C2	gap2	ATCEA4	94							

	741	1602:877..1242		S30841								
153802	ATU015742	ATL8C31124:847..217	gap2	ATCEA4S3940, ATCEA4S31490	94, 90							
153803	ATU015743	ATL8C21555:965..792	gap2	ATCEA4S93	94							
153804	ATU015744	ATL8C7523:774..315	gap2	ATCEA4S15721	94							
153805	ATU015745	ATL8C38316:987..594	gap2	ATCEA4S30444	94							
153806	ATU015746	ATL8C7561:307..216	gap2	ATCEA4S7762	94							
153807	ATU015747	ATL8C14949:1345..990	gap2	ATCEA4S29750	94							
153808	ATU015748	ATL8C31804:642..427	gap2	ATCEA4S4364	94							
153809	ATU015749	ATL8C21407:167..219	gap2	ATCEA4C714_1	94							
153810	ATU015750	ATL8C18040:914..509	gap2	ATCEA4S3748	94							
153811	ATU015751	ATL8C757:642..1	gap2	ATCEA4C118503_1	94							
153812	ATU015752	ATL8C7580:878..1277	gap2	ATCEA4S12816, ATCEA4	94, 90							

				S12588								
153813	ATU0153	ATL8C21956:2595..3041	gap2	ATCEA4C5482_1	94							
153814	ATU0154	ATL8S9074:222..1	gap2	ATCEA4S2211, ATCEA4C20804_1	94, 94							
153815	ATU0155	ATL8C2114:149..340	gap2	ATCEA4S165	94							
153816	ATU0156	ATL8C8269:1..677	gap2	ATCEA4C12822_1, ATCEA4S24153	94, 91							
153817	ATU0157	ATL8C7749:1087..1290	gap2	ATCEA4C33430_1	94							
153818	ATU0158	ATL8S18995:231..1	gap2	ATCEA4S27214	94							
153819	ATU0159	ATL8C1484:1306..1081	gap2	ATCEA4S30571	94							
153820	ATU0160	ATL8C20983:315..247	gap2	ATCEA4S3326	94							
153821	ATU0161	ATL8S946:564..1	gap2	ATCEA4C673_1	94							
153822	ATU0162	ATL8C7801:119..1	gap2	ATCEA4S11845	94							
153823	ATU0163	ATL8C7636:1..192	gap2	ATCEA4C38790_1, ATCEA4S3962	94, 84							

153824	ATU015764	ATL8C20921:1661..1931	gap2	ATCEA4S2181	94							
153825	ATU015765	ATL8S13706:654..453	gap2	ATCEA4S36313, ATCEA4S16167	94, 91							
153826	ATU015766	ATL8C20913:558..229	gap2	ATCEA4C102033_1	94							
153827	ATU015767	ATL8C35622:1..803	gap2	ATCEA4S22184, ATCEA4C24373_1, ATCEA4S22192	94, 94, 87							
153828	ATU015768	ATL8C10925:159..1	gap2	ATCEA4S6187	94							
153829	ATU015769	ATL8C7887:748..247	gap2	ATCEA4C120904_1	94							
153830	ATU015770	ATL8C18012:682..247	gap2	ATCEA4S7666	94							
153831	ATU015771	ATL8S10856:364..21	gap2	ATCEA4C24628_1	94							
153832	ATU015772	ATL8C32867:1080..1363	gap2	ATCEA4C27204_1	94							
153833	ATU015773	ATL8C1650:6523..6846	gap2	ATCEA4S31702, ATCEA4S26370	94, 82							
153834	ATU015	ATL8C7	gap2	ATCEA4	94							

	774	947:305..1		S2778								
153835	ATU015775	ATL8C5193:565..1	gap2	ATCEA4C3969_1	94							
153836	ATU015776	ATL8C5201:1..242	gap2	ATCEA4S26874, ATCEA4C116754_1	94, 89							
153837	ATU015777	ATL8S19409:651..306	gap2	ATCEA4S15067	94							
153838	ATU015778	ATL8C3647:1..464	gap2	ATCEA4S35081	94							
153839	ATU015779	ATL8S1376:129..386	gap2	ATCEA4C4871_1, ATCEA4C57150_1	94, 82							
153840	ATU015780	ATL8C15007:844..1104	gap2	ATCEA4C22331_1	94							
153841	ATU015781	ATL8C35150:726..978	gap2	ATCEA4S255	94							
153842	ATU015782	ATL8S11050:1..209	gap2	ATCEA4S30019	94							
153843	ATU015783	ATL8S11052:66..357	gap2	ATCEA4C4110_1	94							
153844	ATU015784	ATL8C873:3139..5163	gap2	ATCEA4S611	93			g4263765	100	2539	1.4e-274	(AC006218) hypothetical protein

												[Arabidopsis thaliana]
153845	ATU015785	ATL8C4419:502..288	gap2	ATCEA4S32154	94							
153846	ATU015786	ATL8C3630:522..392	gap2	ATCEA4C31744_1	94							
153847	ATU015787	ATL8C39300:478..575	gap2	ATCEA4S12624	94							
153848	ATU015788	ATL8C14727:8778..9668	gap2	ATCEA4S321, ATCEA4S12828	94, 90							
153849	ATU015789	ATL8C10250:452..916	gap2	ATCEA4C41599_1	94							
153850	ATU015790	ATL8S11203:1..191	gap2	ATCEA4C8504_1	94							
153851	ATU015791	ATL8C14727:1370..4619	gap2	ATCEA4S178, ATCEA4S81	93, 89			g4567296, g4773910, g4038066	100, 39, 37	2378, 119, 235	2.7e-206, 2.6e-07, 2.1e-12	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AF147259) No definition

												line found [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabidopsis thaliana]
153852	ATU015792	ATL8C25195:408..1	gap2	ATCEA4C81344_1	94							
153853	ATU015793	ATL8C14164:171..593	gap2	ATCEA4C120986_1	94							
153854	ATU015794	ATL8S11226:1..145	gap2	ATCEA4S11987	94							
153855	ATU015795	ATL8C44343:783..626	gap2	ATCEA4S18386	94							
153856	ATU015796	ATL8C14164:772..482	gap2	ATCEA4S31786	94							
153857	ATU015797	ATL8C31613:622..231	gap2	ATCEA4S1589	94							
153858	ATU015798	ATL8C47437:686..538	gap2	ATCEA4C50803_1	94							
153859	ATU015799	ATL8C48269:4	gap2	ATCEA4C38854	94, 88							

		34..1		_2, ATCEA4 C38854 _1								
153860	ATU015 800	ATL8C3 1509:1 ..127	gap2	ATCEA4 C20366 _1	94							
153861	ATU015 801	ATL8C8 203:66 1..1	gap2	ATCEA4 S29762 , ATCEA4 S32808	94, 85							
153862	ATU015 802	ATL8C3 5671:5 45..67 4	gap2	ATCEA4 C14128 _1	94							
153863	ATU015 803	ATL8C8 720:12 77..15 88	gap2	ATCEA4 C89397 _1	94							
153864	ATU015 804	ATL8C1 4183:4 49..40 0	gap2	ATCEA4 C17371 _2	94							
153865	ATU015 805	ATL8C1 7864:1 003..1 273	gap2	ATCEA4 S5257	94							
153866	ATU015 806	ATL8C2 9367:2 8..896	gap2	ATCEA4 C20649 _1	94							
153867	ATU015 807	ATL8C1 7859:1 91..1	gap2	ATCEA4 S15617	94							
153868	ATU015 808	ATL8C3 7587:4 77..61 8	gap2	ATCEA4 S34614	94							
153869	ATU015 809	ATL8S1 808:23 0..1	gap2	ATCEA4 C13779 _1	94							
153870	ATU015 810	ATL8C4 9783:1 ..276	gap2	ATCEA4 C51095 _1	94							

153871	ATU015811	ATL8C44415:808..1065	gap2	ATCEA4C49945_1	94							
153872	ATU015812	ATL8C3756:1..576	gap2	ATCEA4C101586_1	94							
153873	ATU015813	ATL8C44503:158..668	gap2	ATCEA4C86703_1	94							
153874	ATU015814	ATL8C7412:862..1132	gap2	ATCEA4C1945_1	94							
153875	ATU015815	ATL8C34440:14..462	gap2	ATCEA4C1945_1	94							
153876	ATU015816	ATL8C8248:117..1	gap2	ATCEA4S33572	94							
153877	ATU015817	ATL8S26416:318..470	gap2	ATCEA4C1868_1	94							
153878	ATU015818	ATL8C13282:1790..1634	gap2	ATCEA4C79731_1	94							
153879	ATU015819	ATL8C34789:398..1	gap2	ATCEA4C40956_1	94							
153880	ATU015820	ATL8C44612:1449..1301	gap2	ATCEA4S31578	94							
153881	ATU015821	ATL8C37889:214..688	gap2	ATCEA4S32943	94							
153882	ATU015822	ATL8C44699:246..1	gap2	ATCEA4C64966_1	94							
153883	ATU015	ATL8C4	gap2	ATCEA4	94							

	823	4723:430..1074		C116299_1								
153884	ATU015824	ATL8C44745:802..1260	gap2	ATCEA4C130312_1	94							
153885	ATU015825	ATL8S27789:131..1	gap2	ATCEA4S34783	94							
153886	ATU015826	ATL8C14543:791..1	gap2	ATCEA4S30926, ATCEA4S33698	94, 89							
153887	ATU015827	ATL8C37547:96..361	gap2	ATCEA4S17048	94							
153888	ATU015828	ATL8C40406:871..746	gap2	ATCEA4S615	94							
153889	ATU015829	ATL8C4233:368..635	gap2	ATCEA4C105680_1, ATCEA4S25948	94, 85							
153890	ATU015830	ATL8S28265:518..1	gap2	ATCEA4C5591_1	94							
153891	ATU015831	ATL8C31604:1..58	gap2	ATCEA4C130374_1	94							
153892	ATU015832	ATL8C31950:86..1	gap2	ATCEA4C6031_1, ATCEA4S17914	94, 86							
153893	ATU015833	ATL8C44754:640..411	gap2	ATCEA4S2697	94							
153894	ATU015834	ATL8C2496:74	gap2	ATCEA4S33756	94, 83							

		8..1314		, ATCEA4S25894								
153895	ATU015835	ATL8C44834:1..117	gap2	ATCEA4C937_3	94							
153896	ATU015836	ATL8C37867:1..271	gap2	ATCEA4S13738	94							
153897	ATU015837	ATL8C39692:38..785	gap2	ATCEA4C146_1, ATCEA4C146_4	94, 88							
153898	ATU015838	ATL8S11684:550..448	gap2	ATCEA4C17442_1	94							
153899	ATU015839	ATL8C8374:1..201	gap2	ATCEA4C92477_1	94							
153900	ATU015840	ATL8C14227:1291..903	gap2	ATCEA4S31618	94							
153901	ATU015841	ATL8C12753:1000..1281	gap2	ATCEA4S26313	94							
153902	ATU015842	ATL8C5260:73..1	gap2	ATCEA4C20079_1	94							
153903	ATU015843	ATL8C34702:293..708	gap2	ATCEA4S10481	94							
153904	ATU015844	ATL8C42158:394..1	gap2	ATCEA4S34950	94							
153905	ATU015845	ATL8C42172:11005..806	gap2	ATCEA4S13827	94							
153906	ATU015	ATL8C4	gap2	ATCEA4	94							

	846	4964:476..360		S5262								
153907	ATU015847	ATL8C15926:1..536	gap2	ATCEA4S33152, ATCEA4C89286_1	94, 92							
153908	ATU015848	ATL8S1164:1..119	gap2	ATCEA4S11020	94							
153909	ATU015849	ATL8C5947:317..1	gap2	ATCEA4C4614_1, ATCEA4S23214	94, 92							
153910	ATU015850	ATL8C45038:2472..2860	gap2	ATCEA4S4569	94							
153911	ATU015851	ATL8C45041:1647..1785	gap2	ATCEA4C1989_1	94							
153912	ATU015852	ATL8C42214:330..127	gap2	ATCEA4S30522	94							
153913	ATU015853	ATL8C39437:123..1	gap2	ATCEA4S27392	94							
153914	ATU015854	ATL8C34569:985..845	gap2	ATCEA4S36338	94							
153915	ATU015855	ATL8S22247:111..1	gap2	ATCEA4C82213_1	94							
153916	ATU015856	ATL8C19087:1..186	gap2	ATCEA4S14656, ATCEA4C80247	94, 91, 89, 82							

				_1, ATCEA4S32805, ATCEA4S14655								
153917	ATU015857	ATL8C1909:977..774	gap2	ATCEA4C289_1	94							
153918	ATU015858	ATL8C30515:1412..1509	gap2	ATCEA4C37866_1	94							
153919	ATU015859	ATL8C39009:1032..1474	gap2	ATCEA4C4560_1, ATCEA4S2879	94, 84							
153920	ATU015860	ATL8C45587:2541..2185	gap2	ATCEA4S26047	94							
153921	ATU015861	ATL8C39142:741..517	gap2	ATCEA4S34808	94							
153922	ATU015862	ATL8C45603:357..58	gap2	ATCEA4S26790	94							
153923	ATU015863	ATL8C8434:211..1	gap2	ATCEA4S12834	94							
153924	ATU015864	ATL8S19555:241..1	gap2	ATCEA4C21755_1	94							
153925	ATU015865	ATL8S20024:257..592	gap2	ATCEA4C8043_1	94							
153926	ATU015866	ATL8S2009:73..508	gap2	ATCEA4S5085	94							
153927	ATU015867	ATL8C529:911	gap2	ATCEA4S3692,	94, 92, 84							

		..1081		ATCEA4S12993, ATCEA4S4457								
153928	ATU015868	ATL8S20540:5..261	gap2	ATCEA4S11337	94							
153929	ATU015869	ATL8C41759:796..1299	gap2	ATCEA4S14802	94							
153930	ATU015870	ATL8S22453:316..222	gap2	ATCEA4S22404, ATCEA4S24469, ATCEA4S25269, ATCEA4S23678, ATCEA4S16002, ATCEA4S16296, ATCEA4S17099, ATCEA4S2438, ATCEA4S17018, ATCEA4S24259, ATCEA4S14197, ATCEA4	94, 91, 90, 89, 87, 85, 84, 84, 84, 84, 84, 83, 82, 82, 82							

				S14092, ATCEA4S13328, ATCEA4S14249, ATCEA4S13534								
153931	ATU0158 71	ATL8S20618:453..2	gap2	ATCEA4C68127_1	94							
153932	ATU0158 72	ATL8C40489:239..565	gap2	ATCEA4S7380	94							
153933	ATU0158 73	ATL8S11844:448..1	gap2	ATCEA4C28110_1	94							
153934	ATU0158 74	ATL8C3541:495..1	gap2	ATCEA4C125840_1	94							
153935	ATU0158 75	ATL8C45832:1011..1570	gap2	ATCEA4S23792	94							
153936	ATU0158 76	ATL8C39105:502..69	gap2	ATCEA4S8410	94							
153937	ATU0158 77	ATL8C20547:208..1	gap2	ATCEA4S11951	94							
153938	ATU0158 78	ATL8C45926:271..529	gap2	ATCEA4S2878	94							
153939	ATU0158 79	ATL8C17469:2147..1972	gap2	ATCEA4C40639_1	94							
153940	ATU0158 80	ATL8C8583:595..364	gap2	ATCEA4S26148	94							

153941	ATU015881	ATL8S3347:158..1	gap2	ATCEA4C116704_1	94							
153942	ATU015882	ATL8S21487:291..82	gap2	ATCEA4S13093	94							
153943	ATU015883	ATL8C10107:807..1007	gap2	ATCEA4S30197	94							
153944	ATU015884	ATL8S21647:1..96	gap2	ATCEA4C44491_2	94							
153945	ATU015885	ATL8C46062:1..86	gap2	ATCEA4S35317	94							
153946	ATU015886	ATL8C29911:858..1067	gap2	ATCEA4S12476	94							
153947	ATU015887	ATL8S11807:301..415	gap2	ATCEA4C119770_1	94							
153948	ATU015888	ATL8C14193:719..89	gap2	ATCEA4C6345_1	94							
153949	ATU015889	ATL8S12065:463..1	gap2	ATCEA4S32380	94							
153950	ATU015890	ATL8C34453:1210..1425	gap2	ATCEA4C32411_1	94							
153951	ATU015891	ATL8C29826:1081..1535	gap2	ATCEA4S15151	94							
153952	ATU015892	ATL8S21990:1..286	gap2	ATCEA4S33258, ATCEA4S26957	94, 93							
153953	ATU015	ATL8C4	gap2	ATCEA4	94, 85							

	893	8763:1..631		S33162, ATCEA4S6661								
153954	ATU015894	ATL8C17281:2436..2852	gap2	ATCEA4S4330	94							
153955	ATU015895	ATL8C8614:1380..1447	gap2	ATCEA4S772	94							
153956	ATU015896	ATL8S22095:179..1	gap2	ATCEA4S2603	94							
153957	ATU015897	ATL8C10868:547..1254	gap2	ATCEA4C113100_1	94							
153958	ATU015898	ATL8C36015:84..294	gap2	ATCEA4S30784	94							
153959	ATU015899	ATL8S22132:182..1	gap2	ATCEA4S26771	94							
153960	ATU015900	ATL8C41036:1711..1848	gap2	ATCEA4C37030_1	94							
153961	ATU015901	ATL8S2233:78..1	gap2	ATCEA4S35993	94							
153962	ATU015902	ATL8C4515:770..1	gap2	ATCEA4C10672_1, ATCEA4S10378	93, 85	ATL8C4515:741..16	1.00	g3236478	99	356	3.5e-32	(AF071196) 26S protease regulatory subunit [Gossypium hirsut

												um]
153963	ATU015903	ATL8C7165:42..318	gap2	ATCEA4C1808_1, ATCEA4S2781	94, 93							
153964	ATU015904	ATL8S22429:1..140	gap2	ATCEA4C26836_1	94							
153965	ATU015905	ATL8C2975:514..777	gap2	ATCEA4S31571	94							
153966	ATU015906	ATL8C31900:602..1	gap2	ATCEA4S36283, ATCEA4C821_3	94, 88							
153967	ATU015907	ATL8C3738:1028..1280	gap2	ATCEA4S31854	94							
153968	ATU015908	ATL8C32185:813..200	gap2	ATCEA4C42120_1	94							
153969	ATU015909	ATL8C37359:438..131	gap2	ATCEA4S26654	94							
153970	ATU015910	ATL8C17824:108..1	gap2	ATCEA4S32621, ATCEA4S20412	94, 94							
153971	ATU015911	ATL8C2843:1..482	gap2	ATCEA4S35144	94							
153972	ATU015912	ATL8C3735:2276..2707	gap2	ATCEA4C8984_2	94							
153973	ATU015913	ATL8C13792:444..32	gap2	ATCEA4S12033	94							

		6										
153974	ATU015914	ATL8C39282:357..491	gap2	ATCEA4C2663_1	94							
153975	ATU015915	ATL8S24010:1..341	gap2	ATCEA4C3557_1	94							
153976	ATU015916	ATL8S24462:1..220	gap2	ATCEA4S30230	94							
153977	ATU015917	ATL8C42521:3264..3127	gap2	ATCEA4S253	94							
153978	ATU015918	ATL8S5350:527..460	gap2	ATCEA4C26392_2	94							
153979	ATU015919	ATL8C20289:1471..955	gap2	ATCEA4C110716_1	94							
153980	ATU015920	ATL8S24477:193..367	gap2	ATCEA4S12024	94							
153981	ATU015921	ATL8C12073:534..84	gap2	ATCEA4C42484_1	94							
153982	ATU015922	ATL8C17627:588..269	gap2	ATCEA4C4283_1	94							
153983	ATU015923	ATL8C8729:3704..3514	gap2	ATCEA4S29992	94							
153984	ATU015924	ATL8S24663:20..100	gap2	ATCEA4S13786	94							
153985	ATU015925	ATL8S12511:163..86	gap2	ATCEA4S29075	94							
153986	ATU015	ATL8C2	gap2	ATCEA4	94							

	926	934:1..247		S5141								
153987	ATU015927	ATL8C32179:303..709	gap2	ATCEA4C12917_1	94							
153988	ATU015928	ATL8C17121:1505..1971	gap2	ATCEA4C26106_1	94							
153989	ATU015929	ATL8C802:800..1582	gap2	ATCEA4S29943, ATCEA4C6363_1, ATCEA4S8175, ATCEA4S13856	94, 90, 88, 84							
153990	ATU015930	ATL8S25158:72..176	gap2	ATCEA4S13916	94							
153991	ATU015931	ATL8C39262:839..597	gap2	ATCEA4C7644_1	94							
153992	ATU015932	ATL8S25590:1..118	gap2	ATCEA4C74913_1	94							
153993	ATU015933	ATL8C29137:172..1	gap2	ATCEA4S5440	94							
153994	ATU015934	ATL8C13104:1715..1428	gap2	ATCEA4S29806	94							
153995	ATU015935	ATL8C29131:473..1	gap2	ATCEA4C76811_1	94							
153996	ATU015936	ATL8C42633:755..294	gap2	ATCEA4C16960_1	94							

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153997	ATU0159 37	ATL8C46694:250..1	gap2	ATCEA4C23549_2	94							
153998	ATU0159 38	ATL8S29738:251..398	gap2	ATCEA4C17456_1	94							
153999	ATU0159 39	ATL8C2905:1669..2738	gap2	ATCEA4C3781_1	94							
154000	ATU0159 40	ATL8C29038:587..204	gap2	ATCEA4S12253	94							
154001	ATU0159 41	ATL8C29010:488..1	gap2	ATCEA4S32143	94							
154002	ATU0159 42	ATL8S5194:1..331	gap2	ATCEA4C16578_1, ATCEA4S1783	94, 93							
154003	ATU0159 43	ATL8C42717:439..1	gap2	ATCEA4S30756	94							
154004	ATU0159 44	ATL8C29002:1..134	gap2	ATCEA4S5886	94							
154005	ATU0159 45	ATL8C41862:504..1157	gap2	ATCEA4C22643_1	94							
154006	ATU0159 46	ATL8C14010:192..1	gap2	ATCEA4S27706, ATCEA4S27714, ATCEA4C98343_1	94, 86, 82							
154007	ATU0159 47	ATL8S27461:2	gap2	ATCEA4S6273	94							

		49..1										
154008	ATU015948	ATL8C2889:1317..1059	gap2	ATCEA4S15680	94							
154009	ATU015949	ATL8C12421:932..697	gap2	ATCEA4S27221	94							
154010	ATU015950	ATL8C6061:1..255	gap2	ATCEA4C384_1	94							
154011	ATU015951	ATL8C12998:4676..4929	gap2	ATCEA4C8379_1	94							
154012	ATU015952	ATL8S30108:567..227	gap2	ATCEA4C6181_1, ATCEA4S34854	94, 93							
154013	ATU015953	ATL8C11979:1520..1826	gap2	ATCEA4S30175	94							
154014	ATU015954	ATL8S27711:113..1	gap2	ATCEA4S31884	94							
154015	ATU015955	ATL8C28775:1..222	gap2	ATCEA4S30612	94							
154016	ATU015956	ATL8C13987:1..373	gap2	ATCEA4S33141	94							
154017	ATU015957	ATL8C11968:657..750	gap2	ATCEA4C77399_1	94							
154018	ATU015958	ATL8C26438:761..661	gap2	ATCEA4C28864_1	94							
154019	ATU015959	ATL8C20206:6	gap2	ATCEA4S4870	94							

		639..6184										
154020	ATU0151960	ATL8C3289:612..463	gap2	ATCEA4C39083_1	94							
154021	ATU0151961	ATL8S27787:1..458	gap2	ATCEA4S20807	94							
154022	ATU0151962	ATL8S29324:463..288	gap2	ATCEA4S18019	94							
154023	ATU0151963	ATL8C46966:1346..1038	gap2	ATCEA4S26111	94							
154024	ATU0151964	ATL8C28593:11064..752	gap2	ATCEA4C31099_1	94							
154025	ATU0151965	ATL8S12128:537..375	gap2	ATCEA4C69923_1	94							
154026	ATU0151966	ATL8C46985:922..589	gap2	ATCEA4S2579	94							
154027	ATU0151967	ATL8C42017:2278..2472	gap2	ATCEA4C48483_1	94							
154028	ATU0151968	ATL8S4148:670..1	gap2	ATCEA4C5786_1, ATCEA4C5786_2, ATCEA4S10561	94, 93, 89							
154029	ATU0151969	ATL8S22235:336..429	gap2	ATCEA4C92552_2, ATCEA4	94, 89							

				S35276								
154030	ATU0150970	ATL8C32089:99..1	gap2	ATCEA4S11184	94							
154031	ATU0150971	ATL8C47010:1..188	gap2	ATCEA4C80146_1	94							
154032	ATU0150972	ATL8C285:101..513	gap2	ATCEA4C130371_1	94							
154033	ATU0150973	ATL8C45483:1..447	gap2	ATCEA4C92552_2, ATCEA4C92552_1, ATCEA4S35276	94, 90, 85							
154034	ATU0150974	ATL8S28829:712..487	gap2	ATCEA4C29403_1	94							
154035	ATU0150975	ATL8C11602:7543..7734	gap2	ATCEA4C48483_1	94							
154036	ATU0150976	ATL8C35697:5936..6406	gap2	ATCEA4S7347	94							
154037	ATU0150977	ATL8C16903:1..76	gap2	ATCEA4S16354	94							
154038	ATU0150978	ATL8C39085:294..820	gap2	ATCEA4C59247_1, ATCEA4S9513	94, 83							
154039	ATU0150979	ATL8C13925:2579..2056	gap2	ATCEA4C871_1	94							
154040	ATU0150980	ATL8C24421:8	gap2	ATCEA4C7433	94							

		6..1		1								
154041	ATU0159 81	ATL8C40187:1..149	gap2	ATCEA4S32171	94							
154042	ATU0159 82	ATL8C10519:702..970	gap2	ATCEA4S1406	94							
154043	ATU0159 83	ATL8C47018:947..369	gap2	ATCEA4C92175_1	94							
154044	ATU0159 84	ATL8S30316:214..466	gap2	ATCEA4S36122	94							
154045	ATU0159 85	ATL8S307:472..1	gap2	ATCEA4C52050_1	94							
154046	ATU0159 86	ATL8C8846:1185..885	gap2	ATCEA4S454	94							
154047	ATU0159 87	ATL8S21578:1..564	gap2	ATCEA4C42615_1	94							
154048	ATU0159 88	ATL8C34203:1..385	gap2	ATCEA4S30403	94							
154049	ATU0159 89	ATL8C8847:507..1	gap2	ATCEA4S33157	94							
154050	ATU0159 90	ATL8S30887:1..314	gap2	ATCEA4S12220	94							
154051	ATU0159 91	ATL8S30911:59..507	gap2	ATCEA4C165000_1	94							
154052	ATU0159 92	ATL8C34192:1770..2343	gap2	ATCEA4S4559	94							
154053	ATU0159 93	ATL8C47150:1	gap2	ATCEA4S3948	94							

		..276										
154054	ATU015994	ATL8C45481:1..403	gap2	ATCEA4S26578, ATCEA4S18024	94, 82							
154055	ATU015995	ATL8C47211:72..1152	gap2	ATCEA4C33111_1	94							
154056	ATU015996	ATL8C100:1400..1	gap2	ATCEA4C5312_1	94							
154057	ATU015997	ATL8C40667:418..186	gap2	ATCEA4S2902	94							
154058	ATU015998	ATL8C14680:1..199	gap2	ATCEA4S34454	94							
154059	ATU015999	ATL8C47264:211..624	gap2	ATCEA4S20265	94							
154060	ATU016000	ATL8C1681:893..410	gap2	ATCEA4S7	94							
154061	ATU016001	ATL8C37182:94..605	gap2	ATCEA4C103444_1	94							
154062	ATU016002	ATL8C8867:1467..1035	gap2	ATCEA4C102254_2	94							
154063	ATU016003	ATL8C49569:1364..1182	gap2	ATCEA4C5327_1	94							
154064	ATU016004	ATL8S3396:287..468	gap2	ATCEA4S822	94							
154065	ATU016005	ATL8C45724:568..15	gap2	ATCEA4C43861_1,	94, 89							

		83		ATCEA4S22611								
154066	ATU016006	ATL8C3971:259..649	gap2	ATCEA4C16051_1	94							
154067	ATU016007	ATL8C37152:1130..1399	gap2	ATCEA4S30688	94							
154068	ATU016008	ATL8C47386:1169..1378	gap2	ATCEA4S32331	94							
154069	ATU016009	ATL8C47483:318..962	gap2	ATCEA4C75511_1	94							
154070	ATU016010	ATL8S4084:1..204	gap2	ATCEA4S28269	94							
154071	ATU016011	ATL8C3715:3327..3454	gap2	ATCEA4S1850	94							
154072	ATU016012	ATL8C10733:416..712	gap2	ATCEA4S20338	94							
154073	ATU016013	ATL8S4131:500..166	gap2	ATCEA4S32683	94							
154074	ATU016014	ATL8C47575:1001..1203	gap2	ATCEA4C133677_1	94							
154075	ATU016015	ATL8C13332:344..676	gap2	ATCEA4C4129_1	94							
154076	ATU016016	ATL8C27063:98..1	gap2	ATCEA4C85550_1, ATCEA4S26552	94, 90							

154077	ATU0160017	ATL8S4483:380..656	gap2	ATCEA4S4696	94							
154078	ATU0160018	ATL8C9:431..568	gap2	ATCEA4S253	94							
154079	ATU0160019	ATL8C39339:929..852	gap2	ATCEA4C17932_1	94							
154080	ATU0160020	ATL8C16214:484..693	gap2	ATCEA4C5216_2	94							
154081	ATU0160021	ATL8S453:434..611	gap2	ATCEA4S12364	94							
154082	ATU0160022	ATL8S29972:30..307	gap2	ATCEA4C100434_1	94							
154083	ATU0160023	ATL8C47623:680..1043	gap2	ATCEA4S30778	94							
154084	ATU0160024	ATL8C9017:230..696	gap2	ATCEA4C27416_1	94							
154085	ATU0160025	ATL8C39808:758..531	gap2	ATCEA4C3603_1	94							
154086	ATU0160026	ATL8C19806:1..208	gap2	ATCEA4C89206_1	94							
154087	ATU0160027	ATL8C34113:801..599	gap2	ATCEA4S30318	94							
154088	ATU0160028	ATL8S4772:502..578	gap2	ATCEA4C17741_1	94							
154089	ATU0160029	ATL8C42265:1..376	gap2	ATCEA4C78712_1	94							

154090	ATU016030	ATL8S5555:56..1	gap2	ATCEA4S29348	94							
154091	ATU016031	ATL8C41239:130..192	gap2	ATCEA4C5251_1	94							
154092	ATU016032	ATL8S13497:1..89	gap2	ATCEA4S3009	94							
154093	ATU016033	ATL8C16683:1227..1571	gap2	ATCEA4S12658	94							
154094	ATU016034	ATL8C10712:700..1144	gap2	ATCEA4C27841_1, ATCEA4S297	94, 89							
154095	ATU016035	ATL8C37635:1..66	gap2	ATCEA4C51091_1	94							
154096	ATU016036	ATL8S6077:161..238	gap2	ATCEA4S15162	94							
154097	ATU016037	ATL8C10686:771..1135	gap2	ATCEA4S35277, ATCEA4C50543_1	93, 87			g1931639	100	582		(U95973) lysophospholipase isolog [Arabidopsis thaliana]
154098	ATU016038	ATL8C27373:1828..2991	gap2	ATCEA4C16303_1	94							
154099	ATU016039	ATL8S19775:1..213	gap2	ATCEA4S12391	94							
154100	ATU016040	ATL8C11500:1	gap2	ATCEA4S32301	94, 89, 83							

		..337		, ATCEA4S20461 , ATCEA4S24030								
154101	ATU016041	ATL8C27363:815..589	gap2	ATCEA4S4290	94							
154102	ATU016042	ATL8C36240:3097..3246	gap2	ATCEA4C9432_1	94							
154103	ATU016043	ATL8C6231:139..732	gap2	ATCEA4C562_1	94							
154104	ATU016044	ATL8S617:557..189	gap2	ATCEA4C136518_1	94							
154105	ATU016045	ATL8S6177:453..571	gap2	ATCEA4S32123	94							
154106	ATU016046	ATL8S6198:75..1	gap2	ATCEA4S27215	94							
154107	ATU016047	ATL8S6281:1..130	gap2	ATCEA4C2308_1	94							
154108	ATU016048	ATL8C14053:4757..4997	gap2	ATCEA4S179	94							
154109	ATU016049	ATL8C16616:935..1109	gap2	ATCEA4S3285	94							
154110	ATU016050	ATL8C3704:1611..753	gap2	ATCEA4C25145_1	94							
154111	ATU016051	ATL8S6406:327..590	gap2	ATCEA4S18279	94							

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154112	ATU016052	ATL8S6522:172..1	gap2	ATCEA4S3791	94							
154113	ATU016053	ATL8S6553:554..496	gap2	ATCEA4C59647_1	94							
154114	ATU016054	ATL8C40704:613..1211	gap2	ATCEA4C70194_1	94							
154115	ATU016055	ATL8C37003:1..656	gap2	ATCEA4C479_1	94							
154116	ATU016056	ATL8C47881:146..1	gap2	ATCEA4C26994_1	94							
154117	ATU016057	ATL8C34060:1916..1982	gap2	ATCEA4S29684	94							
154118	ATU016058	ATL8S7260:602..426	gap2	ATCEA4S36302	94							
154119	ATU016059	ATL8S7268:130..1	gap2	ATCEA4S931	94							
154120	ATU016060	ATL8C9196:575..170	gap2	ATCEA4S18691	94							
154121	ATU016061	ATL8C3404:1..56	gap2	ATCEA4S1253	94							
154122	ATU016062	ATL8C43330:445..226	gap2	ATCEA4C24889_3	94							
154123	ATU016063	ATL8C27060:156..1	gap2	ATCEA4S29741	94							
154124	ATU016064	ATL8C16566:534..1008	gap2	ATCEA4C118948_1	94							
154125	ATU016	ATL8C1	gap2	ATCEA4	94							

	065	6564:453..118		S30443								
154126	ATU016066	ATL8C48000:2207..1699	gap2	ATCEA4S22067	94							
154127	ATU016067	ATL8C36833:151..221	gap2	ATCEA4C101225_1	94							
154128	ATU016068	ATL8C19683:506..822	gap2	ATCEA4S33277, ATCEA4C7368_5	94, 94							
154129	ATU016069	ATL8S8422:78..1	gap2	ATCEA4S35993	94							
154130	ATU016070	ATL8C9219:718..1004	gap2	ATCEA4S1555	94							
154131	ATU016071	ATL8C26974:478..819	gap2	ATCEA4S29991	94							
154132	ATU016072	ATL8C41936:452..1	gap2	ATCEA4S34988	94							
154133	ATU016073	ATL8C48024:707..263	gap2	ATCEA4C22235_1	94							
154134	ATU016074	ATL8C48039:366..697	gap2	ATCEA4S3610	94							
154135	ATU016075	ATL8S9108:114..460	gap2	ATCEA4S11306	94							
154136	ATU016076	ATL8C36120:2	gap2	ATCEA4C4813_	94							

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		231..2003		4								
154137	ATU016077	ATL8C19660:439..500	gap2	ATCEA4C127604_1	94							
154138	ATU016078	ATL8C14072:4955..5387	gap2	ATCEA4S25215	94							
154139	ATU016079	ATL8C38701:1249..645	gap2	ATCEA4C1497_1	94							
154140	ATU016080	ATL8C19652:293..1	gap2	ATCEA4S3403	94							
154141	ATU016081	ATL8C26839:1..456	gap2	ATCEA4C119190_1	94							
154142	ATU016082	ATL8C33764:1..373	gap2	ATCEA4C65573_1	94							
154143	ATU016083	ATL8C46543:260..2027	gap2	ATCEA4S35736, ATCEA4S36009, ATCEA4C33385_1, ATCEA4C61441_1	93, 93, 87, 82			g3033375	100	1090	5.7e-104	(AC004238) putative berberine bridge enzyme [Arabidopsis thaliana]
154144	ATU016084	ATL8C36136:1..604	gap2	ATCEA4C36908_1	94							
154145	ATU016085	ATL8S9137:214..55	gap2	ATCEA4S29075	94							
154146	ATU016086	ATL8S9143:406..100	gap2	ATCEA4C88731_1	94							

154147	ATU016087	ATL8S9425:1..229	gap2	ATCEA4C28242_1	94							
154148	ATU016088	ATL8S6288:1..297	gap2	ATCEA4C86887_1, ATCEA4S31675	94, 91							
154149	ATU016089	ATL8C48176:535..947	gap2	ATCEA4S3030	94							
154150	ATU016090	ATL8C3886:1..225	gap2	ATCEA4S13683	94							
154151	ATU016091	ATL8C29090:331..222	gap2	ATCEA4C23755_1	94							
154152	ATU016092	ATL8C1958:373..578	gap2	ATCEA4S30626	94							
154153	ATU016093	ATL8S9807:371..240	gap2	ATCEA4S3145	94							
154154	ATU016094	ATL8C16460:449..841	gap2	ATCEA4S1876	94							
154155	ATU016095	ATL8S9990:707..510	gap2	ATCEA4C6075_1	94							
154156	ATU016096	ATL8C9372:1653..1881	gap2	ATCEA4S13724	94							
154157	ATU016097	ATL8C1947:1198..537	gap2	ATCEA4C54892_1	94							
154158	ATU016098	ATL8C7491:1285..1053	gap2	ATCEA4C68562_1	94							

154159	ATU0160099	ATL8C30905:900..194	gap2	ATCEA4C1860_2	94							
154160	ATU0160100	ATL8C13089:5900..5538	gap2	ATCEA4S19908	94							
154161	ATU0160101	ATL8C33882:789..520	gap2	ATCEA4S23938	94							
154162	ATU0160102	ATL8C9388:5175..4803	gap2	ATCEA4S344	94							
154163	ATU0160103	ATL8S9830:566..268	gap2	ATCEA4C8924_1	94							
154164	ATU0160104	ATL8C47675:527..779	gap2	ATCEA4C4617_4	94							
154165	ATU0160105	ATL8C45687:750..1299	gap2	ATCEA4C17888_1	94							
154166	ATU0160106	ATL8S2757:114..1	gap2	ATCEA4C19752_1	94							
154167	ATU0160107	ATL8C11679:5204..4802	gap2	ATCEA4S17897	94							
154168	ATU0160108	ATL8C48366:943..1459	gap2	ATCEA4C62604_1	94							
154169	ATU0160109	ATL8S6709:1..219	gap2	ATCEA4S31785, ATCEA4C6316_1	94, 92							

154170	ATU0161 10	ATL8C16375:699..1083	gap2	ATCEA4C75486_2	94							
154171	ATU0161 11	ATL8C31401:1..667	gap2	ATCEA4C35156_1	94							
154172	ATU0161 12	ATL8S25435:476..584	gap2	ATCEA4S32533	94							
154173	ATU0161 13	ATL8C4845:2262..2050	gap2	ATCEA4S32096	94							
154174	ATU0161 14	ATL8C30022:1..220	gap2	ATCEA4C77676_1	94							
154175	ATU0161 15	ATL8C40819:543..434	gap2	ATCEA4S30224	94							
154176	ATU0161 16	ATL8C30246:514..1	gap2	ATCEA4C138377_1, ATCEA4S11432	94, 93							
154177	ATU0161 17	ATL8C38561:1028..115	gap2	ATCEA4C72951_1, ATCEA4S32589, ATCEA4C72951_3	94, 90, 82							
154178	ATU0161 18	ATL8C22575:1141..768	gap2	ATCEA4S33726, ATCEA4S10276	94, 94							
154179	ATU0161 19	ATL8C46550:1488..7	gap2	ATCEA4S12074,	94, 93, 92,							

		98		ATCEA4S26879, ATCEA4S4028, ATCEA4S4276, ATCEA4S4324, ATCEA4S5876	90, 88, 87							
154180	ATU016120	ATL8C48465:1625..1180	gap2	ATCEA4C101962_1	94							
154181	ATU016121	ATL8C26380:708..550	gap2	ATCEA4C24366_1	94							
154182	ATU016122	ATL8S12832:1..615	gap2	ATCEA4C7464_1	94							
154183	ATU016123	ATL8C48575:460..772	gap2	ATCEA4S7659	94							
154184	ATU016124	ATL8S19108:794..671	gap2	ATCEA4C128139_2, ATCEA4S28620	94, 83							
154185	ATU016125	ATL8S14632:466..211	gap2	ATCEA4C1974_1	94							
154186	ATU016126	ATL8C33753:236..647	gap2	ATCEA4C48541_1	94							
154187	ATU016127	ATL8C9445:1389..1258	gap2	ATCEA4S7709	94							
154188	ATU016	ATL8C2	gap2	ATCEA4	94							

	128	6321:2677..2453		S26851								
154189	ATU0161129	ATL8C11660:1624..1347	gap2	ATCEA4S32694	94							
154190	ATU0161130	ATL8S24738:1..117	gap2	ATCEA4C3273_1	94							
154191	ATU0161131	ATL8C35337:1030..385	gap2	ATCEA4S26298, ATCEA4C87185_1	94, 82							
154192	ATU0161132	ATL8C19486:1015..727	gap2	ATCEA4C4941_1	94							
154193	ATU0161133	ATL8C6406:626..977	gap2	ATCEA4C4176_1, ATCEA4S20256	94, 82							
154194	ATU0161134	ATL8C26192:540..768	gap2	ATCEA4S1408	94							
154195	ATU0161135	ATL8C11636:1429..1956	gap2	ATCEA4C33157_1	94							
154196	ATU0161136	ATL8C26101:707..319	gap2	ATCEA4S22223	94							
154197	ATU0161137	ATL8S14809:625..319	gap2	ATCEA4S6138	94							
154198	ATU0161138	ATL8C34996:1..547	gap2	ATCEA4C129788_1	94							

154199	ATU0161139	ATL8C41967:327..15	gap2	ATCEA4S30169	94							
154200	ATU0161140	ATL8C38474:68..1	gap2	ATCEA4C8319_1	94							
154201	ATU0161141	ATL8C48809:792..1322	gap2	ATCEA4C24107_1	94							
154202	ATU0161142	ATL8C48862:949..550	gap2	ATCEA4S1591	94							
154203	ATU0161143	ATL8C48869:941..764	gap2	ATCEA4S12126	94							
154204	ATU0161144	ATL8S19100:136..66	gap2	ATCEA4C14442_1	94							
154205	ATU0161145	ATL8C11576:535..731	gap2	ATCEA4S9273	94							
154206	ATU0161146	ATL8C3976:1..666	gap2	ATCEA4C18760_2, ATCEA4C18760_1	94, 88							
154207	ATU0161147	ATL8C11560:668..276	gap2	ATCEA4C120237_1	94							
154208	ATU0161148	ATL8C25839:1705..1178	gap2	ATCEA4C28609_1	94							
154209	ATU0161149	ATL8C16250:3305..2744	gap2	ATCEA4C116648_1	94							
154210	ATU016	ATL8C4	gap2	ATCEA4	94							

	150	3923:713..1125		S18639								
154211	ATU016151	ATL8C9455:246..825	gap2	ATCEA4C445_7, ATCEA4S21756, ATCEA4S32580, ATCEA4S32744, ATCEA4C445_1, ATCEA4C445_2, ATCEA4S29551, ATCEA4C445_5, ATCEA4S23067	94, 92, 91, 91, 90, 88, 85, 84, 83							
154212	ATU016152	ATL8C38703:1640..1879	gap2	ATCEA4S31805	94							
154213	ATU016153	ATL8C30990:628..485	gap2	ATCEA4S35166, ATCEA4C100428_1	94, 91							
154214	ATU016154	ATL8C9453:617..305	gap2	ATCEA4C26890_1	94							
154215	ATU016155	ATL8C2712:44	gap2	ATCEA4S11449	94, 90							

		3..1342		, ATCEA4C34466_1								
154216	ATU016156	ATL8C19154:628..1	gap2	ATCEA4C684_1	94							
154217	ATU016157	ATL8C49009:454..558	gap2	ATCEA4C5447_10	94							
154218	ATU016158	ATL8C16234:719..1181	gap2	ATCEA4S33627	94							
154219	ATU016159	ATL8C27583:283..61	gap2	ATCEA4C54594_1	94							
154220	ATU016160	ATL8S7070:174..102	gap2	ATCEA4C18778_1	94							
154221	ATU016161	ATL8C49119:494..1	gap2	ATCEA4S28216	94							
154222	ATU016162	ATL8C41299:997..656	gap2	ATCEA4S898, ATCEA4S5510	94, 85							
154223	ATU016163	ATL8C965:472..87	gap2	ATCEA4S12160	94							
154224	ATU016164	ATL8C33688:685..250	gap2	ATCEA4C900_1	94							
154225	ATU016165	ATL8S14082:1..268	gap2	ATCEA4C7730_3, ATCEA4S14820	94, 82							
154226	ATU016166	ATL8C10539:1..283	gap2	ATCEA4S30014	94							
154227	ATU016	ATL8S1	gap2	ATCEA4	94							

	167	5078:1..318		C11906 9_1								
154228	ATU016 168	ATL8C2 5499:1 29..50 9	gap2	ATCEA4 S34966	94							
154229	ATU016 169	ATL8C1 3882:1 ..221	gap2	ATCEA4 C19928 _1, ATCEA4 S18497	94, 91							
154230	ATU016 170	ATL8C4 505:1. .195	gap2	ATCEA4 S17546 , ATCEA4 S23154	94, 84							
154231	ATU016 171	ATL8C7 460:95 6..757	gap2	ATCEA4 S33315 , ATCEA4 S35244 , ATCEA4 C869_2	94, 92, 90							
154232	ATU016 172	ATL8C1 6201:7 71..69 9	gap2	ATCEA4 C16900 _2	94							
154233	ATU016 173	ATL8C1 9093:4 18..72 7	gap2	ATCEA4 S30615	94							
154234	ATU016 174	ATL8C3 5370:3 545..3 963	gap2	ATCEA4 C89403 _1	94							
154235	ATU016 175	ATL8C1 620:99 ..28	gap2	ATCEA4 S33457	94							
154236	ATU016 176	ATL8S2 4628:2 09..28 4	gap2	ATCEA4 C65333 _1	94							
154237	ATU016	ATL8C1	gap2	ATCEA4	94							

	177	906:228..611		S22599								
154238	ATU016178	ATL8C22723:223..1	gap2	ATCEA4C7638_1	94							
154239	ATU016179	ATL8C30938:438..576	gap2	ATCEA4C45998_1	94							
154240	ATU016180	ATL8C10432:118..729	gap2	ATCEA4S14352, ATCEA4C961_2	94, 89							
154241	ATU016181	ATL8S15407:503..1	gap2	ATCEA4C142680_1	94							
154242	ATU016182	ATL8C33966:1086..598	gap2	ATCEA4C41920_2, ATCEA4C41920_1	94, 92							
154243	ATU016183	ATL8C38667:1..85	gap2	ATCEA4S34246	94							
154244	ATU016184	ATL8C25304:312..1	gap2	ATCEA4S35380	94							
154245	ATU016185	ATL8S4504:1..87	gap2	ATCEA4C557_1	94							
154246	ATU016186	ATL8C13019:2061..2259	gap2	ATCEA4S3336	94							
154247	ATU016187	ATL8C5577:153..927	gap2	ATCEA4C127616_1, ATCEA4S35516	94, 83							
154248	ATU016188	ATL8C25254:1..155	gap2	ATCEA4S34550	94							

154249	ATU0161 89	ATL8C38163:1436..1294	gap2	ATCEA4C5895_1, ATCEA4S20116	94, 91							
154250	ATU0161 90	ATL8C44029:748..984	gap2	ATCEA4S188	94							
154251	ATU0161 91	ATL8C25252:1324..1145	gap2	ATCEA4C99289_1	94							
154252	ATU0161 92	ATL8C19678:1..209	gap2	ATCEA4S33271, ATCEA4C98359_1	94, 92							
154253	ATU0161 93	ATL8C25250:825..742	gap2	ATCEA4S32176	94							
154254	ATU0161 94	ATL8C32344:658..1	gap2	ATCEA4C1900_5, ATCEA4S21386, ATCEA4S31940, ATCEA4C1900_1	94, 90, 86, 83							
154255	ATU0161 95	ATL8C45022:322..1	gap2	ATCEA4C55786_2, ATCEA4S8015	94; 88							
154256	ATU0161 96	ATL8C16166:839..950	gap2	ATCEA4S26164	94							

154257	ATU0161197	ATL8C10524:396..640	gap2	ATCEA4C7530_1	94							
154258	ATU0161198	ATL8C49480:1..152	gap2	ATCEA4S24053	94							
154259	ATU0161199	ATL8C32827:486..761	gap2	ATCEA4S29861, ATCEA4S14633, ATCEA4C86_43, ATCEA4S18328	94, 94, 88, 85							
154260	ATU0161200	ATL8S19477:135..560	gap2	ATCEA4S27669, ATCEA4S26519	94, 93							
154261	ATU0161201	ATL8C25174:3980..4084	gap2	ATCEA4C11404_1	94							
154262	ATU0161202	ATL8C2510:263..640	gap2	ATCEA4S12368	94							
154263	ATU0161203	ATL8C31951:1892..1407	gap2	ATCEA4S34984	94							
154264	ATU0161204	ATL8C12744:235..785	gap2	ATCEA4C135138_1	94							
154265	ATU0161205	ATL8C24947:422..958	gap2	ATCEA4C11565_1	94							
154266	ATU0161206	ATL8C16019:9	gap2	ATCEA4S30358	94							

		49..1183										
154267	ATU0162207	ATL8C24947:1..154	gap2	ATCEA4S14181	94							
154268	ATU0162208	ATL8C35871:220..107	gap2	ATCEA4C469_1	94							
154269	ATU0162209	ATL8C10884:620..1184	gap2	ATCEA4C2220_5, ATCEA4S3927, ATCEA4S18774, ATCEA4C2220_2, ATCEA4S3697, ATCEA4S12471, ATCEA4S12432	94, 94, 93, 93, 90, 87, 83							
154270	ATU0162210	ATL8C49909:1721..1792	gap2	ATCEA4S26019	94							
154271	ATU0162211	ATL8C33432:1696..1623	gap2	ATCEA4S7837	94							
154272	ATU0162212	ATL8C24831:183..71	gap2	ATCEA4S30940	94							
154273	ATU0162213	ATL8C41705:346..720	gap2	ATCEA4S12395	94							
154274	ATU0162214	ATL8S15868:2	gap2	ATCEA4S36132	94							

		74..456										
154275	ATU0162 15	ATL8S15917:582..346	gap2	ATCEA4S13061	94							
154276	ATU0162 16	ATL8C50022:87..1	gap2	ATCEA4S30110	94							
154277	ATU0162 17	ATL8C15963:1..98	gap2	ATCEA4S6106	94							
154278	ATU0162 18	ATL8C23318:56..542	gap2	ATCEA4S7898, ATCEA4S33528	93, 89	ATL8C23318:151..497	0.99	g3702317	99	262	1.4e-09	(AC005397) unknown protein [Arabidopsis thaliana]
154279	ATU0162 19	ATL8C30527:541..1170	gap2	ATCEA4C6005_1	93	ATL8C30527:550..1042	0.95	g2879811	99	449	5.9e-44	(AJ223316) ribosomal protein L30 [Lupinus luteus]
154280	ATU0162 20	ATL8C3128:538..1159	gap2	ATCEA4S32079	93	ATL8C3128:552..1110	0.87	g4678305	99	420	3.8e-33	(AL049655) putative protein [Arabidopsis thaliana]
154281	ATU0162 21	ATL8C50236:7	gap2	ATCEA4C11735	93, 84	ATL8C50236:7	0.85	g2194118	99	99	1.7e-07	(AC002062)

		87..132		9_2, ATCEA4C117359_1		87..141						F20P5.4 gene product [Arabidopsis thaliana]
154282	ATU016222	ATL8C12340:225..889	gap2	ATCEA4S33608	93	ATL8C12340:362..523	0.81	g548702	99	203	6.3e-20	DNA-DIRECTED RNA POLYMERASE II 14.5 KD POLYPEPTIDE (RPB9) (RPB14.5) [Homo sapiens]
154283	ATU016223	ATL8C7723:1..2641	gap2	ATCEA4C20463_1	93	ATL8C7723:238..1118, ATL8C7723:2384..1399	0.74, 0.84	g4417302, g3319362, g4586071	99, 31, 30	361, 1234, 496	0.0025, 2.3e-107, 2.2e-35	(AC006446) hypothetical protein [Arabidopsis thaliana]; (AF077408) contains similarity to reverse transcriptas

												e (Pfam: rvt.hmm, score 19.29) [Arabidopsis thaliana]; (AC006194) putative PHA2-like protein [Arabidopsis thaliana]
154284	ATU016224	ATL8C3699:3389..364	gap2	ATCEA4C42942_1, ATCEA4S5256	93, 90	ATL8C3699:3107..364	0.73	g3445211, g3860246, g3738335	99, 63, 38	177, 687, 311	6.7e-11, 7.2e-66, 8.6e-33	(AC004786) hypothetical protein [Arabidopsis thaliana]; (AC005824) putative reverse-transcriptase protein [Arabidopsis

												thaliana]; (AC005170) unknown protein [Arabidopsis thaliana]
154285	ATU016225	ATL8C43629:174..3547	gap2	ATCEA4S27857, ATCEA4C23871_1, ATCEA4C23871_2	93, 92, 84	ATL8C43629:192..3546	0.66	g2407800, g4519417	99, 91	538, 511		(Y12575) histone H2A.F/Z [Arabidopsis thaliana]; (AB024327) WD-40 repeat protein [Homo sapiens]
154286	ATU016226	ATL8C35685:1298..195	gap2	ATCEA4S32763	93	ATL8C35685:1142..458	0.63	g3746073	99	197	1.4e-21	(AC005311) hypothetical protein [Arabidopsis thaliana]
154287	ATU016227	ATL8C37453:1701..186	gap2	ATCEA4C1987_1, ATCEA4	93, 89	ATL8C37453:1429..215	0.61	g2500190	99	743		RAC-LIKE GTP BINDIN

				S19610								G PROTEIN ARAC1 [Arabidopsis thaliana]
154288	ATU016228	ATL8C44458:890..364	gap2	ATCEA4S29946	93	ATL8C44458:794..364	0.43	g4455211	99	184	5.4e-17	(AL035440) STIG1 like protein [Arabidopsis thaliana]
154289	ATU016229	ATL8C46221:1..1908	gap2	ATCEA4S31219, ATCEA4S2705, ATCEA4S12797	93, 87, 82	ATL8C46221:152..473	0.42	g4662648, g2961385	99, 52	90, 249	9.1e-07, 1.7e-23	(AC006419) hypothetical protein [Arabidopsis thaliana]; (AL022141) putative protein [Arabidopsis thaliana]
154290	ATU016230	ATL8C209:671..19	gap2	ATCEA4S36042, ATCEA4C44870_1	93, 88			g3212116	99	243	1.6e-18	(Y17393) prefoldin subunit 2 [Mus

												muscul us]
154291	ATU016 231	ATL8C2 4738:8 66..57 0	gap2	ATCEA4 S29842	93			g41153 55	99	255	8.7e-09	(AC005 957) unknow n protei n [Arabi dopsis thalia na]
154292	ATU016 232	ATL8C4 7787:2 422..1 042	gap2	ATCEA4 C33649 _1, ATCEA4 S12238	93, 83			g38611 53	99	261	1.5e-20	(AJ235 272) CYANEL LE 50S RIBOSO MAL PROTEI N L20 (rplT) [Ricke ttsia prowaz ekii]
154293	ATU016 233	ATL8C1 0279:1 818..1 27	gap2	ATCEA4 S33750 , ATCEA4 S31731	93, 86			g34510 70	99	720		(AL031 326) putati ve protei n [Arabi dopsis thalia na]
154294	ATU016 234	ATL8C3 429:79 6..182	gap2	ATCEA4 S33965 , ATCEA4 S25850	93, 91			g43371 75	99	585	3.8e-60	(AC006 416) ESTs gb|T20 589, gb|T04 648, gb|AA5 97906, gb|T04

												111, gb|R84180, gb|R65428, gb|T44439, gb|T76570, gb|R90004, gb|T45020, gb|T42457, gb|T20921, gb|AA042762 and gb|AA720210 come from this gene. [Arabidopsis thaliana]
154295	ATU016235	ATL8C24652:1121..763	gap2	ATCEA4C73206_1	93			g1420887	99	176	3.9e-10	(U34334) non-specific lipid transfer-like protein [Phaseolus vulgaris]

154296	ATU016236	ATL8C13180:1245..1688	gap2	ATCEA4C167372_1	93			g4262237	99	374	4.9e-29	(AC006200) hypothetical protein [Arabidopsis thaliana]
154297	ATU016237	ATL8S17537:454..233	gap2	ATCEA4C13671_1, ATCEA4S34838	93, 93			g3122724	99	266	1.1e-20	60S RIBOSOMAL PROTEIN L38 [Arabidopsis thaliana]
154298	ATU016238	ATL8C25068:888..718	gap2	ATCEA4S2543	93			g2245090	98	97	3.2e-06	(Z97343) hypothetical protein [Arabidopsis thaliana]
154299	ATU016239	ATL8C17617:750..369	gap2	ATCEA4C50402_1	93	ATL8C17617:750..369	0.58	g3860276	97	163	6.4e-11	(AC005824) unknown protein [Arabidopsis thaliana]
154300	ATU016240	ATL8C21228:2064..852	gap2	ATCEA4C24732_1	93	ATL8C21228:1779..852	0.61	g3746809	96	804	7.7e-83	(AF082882) adenylate kinase [Arabi

												dopsis thaliana]
154301	ATU016241	ATL8C41508:5053..3221	gap2	ATCEA4S36339	93	ATL8C41508:5053..3394	0.70	g461453	95	827	1.1e-63	AUXIN-BINDING PROTEIN 1 PRECURSOR (ABP) [Arabidopsis thaliana]
154302	ATU016242	ATL8S27782:584..23	gap2	ATCEA4C38074_1	93	ATL8S27782:472..98	0.88	g4454013	94	815	3.1e-82	(AL035396) putative protein [Arabidopsis thaliana]
154303	ATU016243	ATL8C1621:2367..410	gap2	ATCEA4C65040_1, ATCEA4S10326	93, 93	ATL8C1621:2293..410	0.84	g4206122	94	1246	1.1e-118	(AF097667) protein phosphatase 2C homolog [Mesembryanthemum crystallinum]
154304	ATU016244	ATL8C22813:1..1287	gap2	ATCEA4C103253_1, ATCEA4C4719	93, 92	ATL8C22813:451..939	0.69	g4455351	94	593	3.7e-63	(AL035524) putative protei

				1								n [Arabidopsis thaliana]
154305	ATU016245	ATL8C10317:1..2242	gap2	ATCEA4C1153_1, ATCEA4S31256	93, 92	ATL8C10317:123..2242	0.93	g2129735	93	2813		serine/threonine-specific kinase (EC 2.7.1.-) precursor - Arabidopsis thaliana [Arabidopsis thaliana]
154306	ATU016246	ATL8C9349:2040..1	gap2	ATCEA4C3447_1, ATCEA4S24445	93, 88	ATL8C9349:1958..499	0.94	g3293547	92	229	1.0e-10	(AF072709) putative oxidoreductase [Streptomyces lividans]
154307	ATU016247	ATL8C37795:1..2430	gap2	ATCEA4S31966	93	ATL8C37795:193..2422	0.95	g2459431	91	244	3.7e-15	(AC002332) unknown protein [Arabidopsis thalia

												na]
154308	ATU016248	ATL8C36158:1..1464	gap2	ATCEA4C5363_2	93	ATL8C36158:290..1224	0.88	g4580461	91	921	6.2e-100	(AC006081) unknown protein [Arabidopsis thaliana]
154309	ATU016249	ATL8C36591:1..763	gap2	ATCEA4C114427_1	93	ATL8C36591:28..609	0.81	g4884932	91	200	6.9e-11	(AF141659) AtHVA22a [Arabidopsis thaliana]
154310	ATU016250	ATL8C13553:1543..451	gap2	ATCEA4C93281_1, ATCEA4C52070_1	93, 86	ATL8C13553:1449..661	0.78	g3213227	91	146	2.0e-09	(AF035209) putative v-SNARE Vti1a [Mus musculus]
154311	ATU016251	ATL8C43673:1..991	gap2	ATCEA4C147984_1	93	ATL8C43673:508..703	0.51	g4753648	91	452		(AL049751) putative protein [Arabidopsis thaliana]
154312	ATU016252	ATL8C23029:5432..1	gap2	ATCEA4S30665, ATCEA4C28379_1,	93, 92, 91, 86	ATL8C23029:4301..249	0.74	g4220522	90	6922	0.0	(AL035356) putative protein

				ATCEA4C58937_1, ATCEA4S33057								[Arabidopsis thaliana]
154313	ATU016253	ATL8C38411:2572..134	gap2	ATCEA4C31565_1	93	ATL8C38411:2572..134	0.43	g1871179	89	112	5.6e-07	(U90439) FMRFamide precursor isolog [Arabidopsis thaliana]
154314	ATU016254	ATL8C47657:1205..196	gap2	ATCEA4S36134	93			g4678928	89	420	2.8e-47	(AL049711) putative serine/threonine protein kinase [Arabidopsis thaliana]
154315	ATU016255	ATL8C46335:2009..169	gap2	ATCEA4S36367, ATCEA4C1847_1	93, 91	ATL8C46335:1982..289	0.66	g4164576	88	1718	5.8e-187	(AF098946) CTF2A [Arabidopsis thaliana]
154316	ATU016256	ATL8C16354:1..1602	gap2	ATCEA4S35533	93	ATL8C16354:120..1602	0.94	g3201611	87	1617	4.7e-162	(AC004669) unknown protein [Arabidopsis

												thaliana]
154317	ATU016257	ATL8C23279:1457..1	gap2	ATCEA4S696	93	ATL8C23279:1367..41	0.81	g4835768	87	1687	7.4e-173	(AC007202) Is a member of the PF|00083 sugar transporter family. [Arabidopsis thaliana]
154318	ATU016258	ATL8C37414:473..1	gap2	ATCEA4S34496, ATCEA4C50505_1	93, 91	ATL8C37414:473..45	0.92	g2462834	85	505		(AF000657) hypothetical protein [Arabidopsis thaliana]
154319	ATU016259	ATL8C11794:1..3412	gap2	ATCEA4C16916_1, ATCEA4C6938_2, ATCEA4C6938_1	93, 90, 86	ATL8C11794:70..3383	0.80	g3763925, g3763926	85, 66	978, 698	1.5e-33, 5.0e-41	(AC004450) putative Af10-protein [Arabidopsis thaliana]; (AC004450) unknown protein

												[Arabidopsis thaliana]
154320	ATU016260	ATL8C21210:7170..5085	gap2	ATCEA4C6809_1	93	ATL8C21210:7019..5085	0.79	g4585993	85	413	6.8e-33	(AC005287) Similar to serine/threonine kinases [Arabidopsis thaliana]
154321	ATU016261	ATL8C20288:1678..1	gap2	ATCEA4C3118_1, ATCEA4S4979	93, 87	ATL8C20288:1626..14	0.81	g3080390	84	1654	4.2e-134	(AL022603) putative protein [Arabidopsis thaliana]
154322	ATU016262	ATL8C48097:1..1343	gap2	ATCEA4C119205_1, ATCEA4C21033_1	93, 86	ATL8C48097:235..1114	0.74	g4895238	84	178	5.5e-08	(AC007659) unknown protein [Arabidopsis thaliana]
154323	ATU016263	ATL8C17329:1..5313	gap2	ATCEA4C54758_1	93	ATL8C17329:8..5142	0.62	g4678310, g3928097	84, 42	840, 137	1.1e-60, 3.0e-45	(AL049655) putative protein [Arabidopsis

												thaliana]; (AC005770) unknown protein, 5' partial [Arabidopsis thaliana]
154324	ATU016264	ATL8S18566:769..1	gap2	ATCEA4C363_1, ATCEA4S33646	93, 88	ATL8S18566:765..305	0.92	g2244709	83	480	2.7e-51	(AB005295) HY5 [Arabidopsis thaliana]
154325	ATU016265	ATL8C27605:1..1603	gap2	ATCEA4S27853, ATCEA4S27533	93, 84	ATL8C27605:231..574	0.61	g4585872	83	868		(AC005850) Hypothetical protein [Arabidopsis thaliana]
154326	ATU016266	ATL8C20807:3694..1886	gap2	ATCEA4S33976, ATCEA4S28026	93, 90	ATL8C20807:3606..1982	0.84	g4128197	81	504	1.5e-42	(U75273) acyl-CoA binding protein [Arabidopsis thaliana]
154327	ATU016267	ATL8C34342:1	gap2	ATCEA4C64143	93, 88	ATL8C34342:1	0.92	g4455198	80	1667	6.7e-82	(AL035440)

		..1515		_1, ATCEA4C102304_1		9..1387						putative protein [Arabidopsis thaliana]
154328	ATU016268	ATL8C47509:1..2789	gap2	ATCEA4S3484, ATCEA4S545, ATCEA4C5215_1	93, 92, 87	ATL8C47509:475..2710	0.84	g1531758	80	1551	4.0e-137	(X98772) AUX1 [Arabidopsis thaliana]
154329	ATU016269	ATL8C12310:112..2260	gap2	ATCEA4C7392_1	93	ATL8C12310:783..2020	0.56	g4914426, g4567281	80, 79	336, 369	9.7e-34, 2.7e-34	(AL050351) putative protein [Arabidopsis thaliana]; (AC006841) unknown protein [Arabidopsis thaliana]
154330	ATU016270	ATL8C34171:1..3204	gap2	ATCEA4C26848_1	93	ATL8C34171:177..3120	0.45	g4539303, g4539304	79, 50	1194, 750	8.5e-126, 2.1e-122	(AL049480) putative protein [Arabidopsis thaliana];

												(AL049480) putative protein [Arabidopsis thaliana]
154331	ATU0161271	ATL8C31488:2392..1355	gap2	ATCEA4S34635, ATCEA4C54462_2	93, 89			g4455203	79	793	5.6e-81	(AL035440) putative protein [Arabidopsis thaliana]
154332	ATU0161272	ATL8C17731:1843..763	gap2	ATCEA4C29891_1	93			g4581146	79	1258	6.1e-122	(AC006919) putative fructose-bisphosphate aldolase, cytoplasmic [Arabidopsis thaliana]
154333	ATU0161273	ATL8C41994:6126..11119	gap2	ATCEA4S126, ATCEA4S178	93, 89	ATL8C41994:6126..9747	0.82	g3377816	78	1898	3.7e-130	(AF076275) contains similarity to Arabidopsis

												thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
154334	ATU016274	ATL8C15706:1945..371	gap2	ATCEA4S36087, ATCEA4S34686	93, 91	ATL8C15706:1793..371	0.79	g3928099	78	1129	1.0e-108	(AC005770) unknown protein [Arabidopsis thaliana]
154335	ATU016275	ATL8C36225:932..71	gap2	ATCEA4S5395, ATCEA4S33494	93, 84	ATL8C36225:888..177	0.71	g3876104	78	206	8.5e-19	(Z54271) Homology with the putative 36.1 yeast protein YHB3_YEAST; cDNA EST CEMSG62F comes from this gene [Caeno

												rhabditis elegans]
154336	ATU016276	ATL8C17858:1269..1	gap2	ATCEA4S28057, ATCEA4S1613	93, 83	ATL8C17858:1164..446	0.63	g140185	78	254		PROBABLE GYP7 PROTEIN [Yarrowia lipolytica]
154337	ATU016277	ATL8S22056:565..1	gap2	ATCEA4C5350_1	93	ATL8S22056:477..66	0.60	g4826860	77	284	1.1e-19	non-histone chromosome protein 2 (S. cerevisiae)-like 1 [Homo sapiens]
154338	ATU016278	ATL8C37946:1..1868	gap2	ATCEA4C78681_1	93	ATL8C37946:212..1762	0.84	g1652297	76	67	1.4e-07	(D90904) hypothetical protein [Synechocystis sp.]
154339	ATU016279	ATL8C21672:3593..34	gap2	ATCEA4S2650, ATCEA4C44005_1	93, 85	ATL8C21672:2519..34	0.71	g3377817	76	902	4.3e-95	(AF076275) contains similarity to C3HC4-

												type zinc fingers (Pfam: zf-C3HC4.hmm, score: 29.48) [Arabidopsis thaliana]
154340	ATU016280	ATL8C37471:674..1448	gap2	ATCEA4C132499_1	93	ATL8C37471:681..1325	0.97	g4586576	75	664		(AB024992) multidrug resistance protein [Cicer arietinum]
154341	ATU016281	ATL8C23357:4467..1150	gap2	ATCEA4C81207_1, ATCEA4C7588_1	93, 82	ATL8C23357:4374..1162	0.76	g3522943	75	3582	0.0	(AC004411) putative p-glycoprotein [Arabidopsis thaliana]
154342	ATU016282	ATL8C43086:1510..1	gap2	ATCEA4C24443_1, ATCEA4S32857, ATCEA4C84766_1, ATCEA4	93, 89, 87, 85	ATL8C43086:1447..54	0.73	g114200	75	81	0.48	SHIKIMATE KINASE PRECURSOR [Lycopersicon esculentum]

				S33330								
154343	ATU016283	ATL8C33916:1677..244	gap2	ATCEA4S10729	93	ATL8C33916:1580..250	0.50	g4538897	75	419		(AL049482) AX110P-like protein [Arabidopsis thaliana]
154344	ATU016284	ATL8C22449:1..5063	gap2	ATCEA4C2177_1	93	ATL8C22449:499..5012	0.85	g3874762, g3882211	74, 74	443, 736	1.2e-30, 1.7e-52	(Z71185) cDNA EST EMBL:D33483 comes from this gene; cDNA EST EMBL:D33961 comes from this gene; cDNA EST EMBL:D34321 comes from this gene; cDNA EST EMBL:D36343 comes from this gene;

												cDNA EST EMBL:D36936 comes from this gene; cDN... []; (AB018288) KIAA0745 protein [Homo sapiens]
154345	ATU0162 85	ATL8C45223:436..1612	gap2	ATCEA4C1063_11	93	ATL8C45223:746..1589	0.80	g4262232	74	675	2.8e-70	(AC006200) putative ribosomal protein L7 [Arabidopsis thaliana]
154346	ATU0162 86	ATL8C5824:1681..1	gap2	ATCEA4C25956_2, ATCEA4C25956_1, ATCEA4S2671	93, 86, 82	ATL8C5824:1571..8	0.77	g2832641	74	608		(AL021710) glycolate oxidase - like protein [Arabidopsis thaliana]
154347	ATU016	ATL8C2	gap2	ATCEA4	93	ATL8C2	0.72	g20886	74	297	1.8e-	(AF002

	287	4589:2680..1410		S2511		4589:2426..1410		51			35	109) hypersensitivity-related gene 201 isolog [Arabidopsis thaliana]
154348	ATU016288	ATL8C37642:1028..1	gap2	ATCEA4C57951_1	93	ATL8C37642:958..195	0.83	g3702332	73	694	7.9e-53	(AC005397) unknown protein [Arabidopsis thaliana]
154349	ATU016289	ATL8C23775:1..1787	gap2	ATCEA4S5958	93	ATL8C23775:221..1772	0.78	g4454012	73	1658	1.9e-184	(AL035396) Pollen-specific protein precursor like [Arabidopsis thaliana]
154350	ATU016290	ATL8C2885:2490..745	gap2	ATCEA4C21342_1, ATCEA4C157724_1, ATCEA4S9092	93, 91, 83			g2924785	73	1265	3.2e-140	(AC002334) similar to disease resistance

												protein [Arabidopsis thaliana]
154351	ATU016291	ATL8C35041:1..829	gap2	ATCEA4C31106_1, ATCEA4C87285_1	93, 84			g3176678	73	1053	2.2e-109	(AC003671) Contains similarity to MYB transcription factor isolog T01024.1 from A. thaliana BAC gb|AC002335. [Arabidopsis thaliana]
154352	ATU016292	ATL8C35555:1043..1	gap2	ATCEA4C14105_1	93	ATL8C35555:939..1200	0.74	g3643597	72	1016	3.7e-82	(AC005395) hypothetical protein [Arabidopsis thaliana]
154353	ATU016293	ATL8C24026:1..856	gap2	ATCEA4S10980, ATCEA4S35808	93, 85	ATL8C24026:91..856	0.97	g4512655	71	535	3.6e-58	(AC007048) putative protei

												n phosphatase 2C [Arabidopsis thaliana]
154354	ATU016294	ATL8C23451:1..1085	gap2	ATCEA4S12377	93	ATL8C23451:72..1085	0.87	g4886290	71	896	4.4e-74	(AL050300) putative protein [Arabidopsis thaliana]
154355	ATU016295	ATL8C31662:1..1132	gap2	ATCEA4C703_1, ATCEA4C703_2	93, 85	ATL8C31662:106..947	0.84	g4218144	71	692	1.7e-73	(AJ132398) glutathione transferase, GST 10b [Arabidopsis thaliana]
154356	ATU016296	ATL8C35457:1910..419	gap2	ATCEA4S35895	93	ATL8C35457:1787..619	0.80	g4406775	71	704	1.5e-37	(AC006836) unknown protein [Arabidopsis thaliana]
154357	ATU016297	ATL8C47658:1032..1	gap2	ATCEA4S6240, ATCEA4C71244_1	93, 87	ATL8C47658:729..188	0.79	g4262233	71	1060	4.1e-89	(AC006200) hypothetical protei

												n [Arabidopsis thaliana]
154358	ATU016298	ATL8C32868:1..2252	gap2	ATCEA4S30747	93	ATL8C32868:41..2133	0.72	g2961357	71	2208	4.4e-217	(AL022140) putative protein [Arabidopsis thaliana]
154359	ATU016299	ATL8C15481:2438..195	gap2	ATCEA4S10377, ATCEA4S29572	93, 87	ATL8C15481:2302..195	0.54	g4678302, g4539403	71, 52	662, 291	4.7e-57, 3.0e-17	(AL049655) putative protein [Arabidopsis thaliana]; (AL049524) putative protein [Arabidopsis thaliana]
154360	ATU016300	ATL8C42008:5437..214	gap2	ATCEA4S126	93	ATL8C42008:5437..214	0.48	g3695396, g4773910	71, 37	1153, 225	7.4e-103, 9.8e-24	(AF096372) contains similarity to Arabidopsis thalia

												na retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
154361	ATU016301	ATL8C22376:3096..2384	gap2	ATCEA4C29002_1	93	ATL8C22376:3031..2435	0.83	g445613	70	295	3.9e-26	ribosomal protein L7 [Solanum tuberosum]
154362	ATU016302	ATL8C31473:2550..181	gap2	ATCEA4C9951_1	93	ATL8C31473:1799..181	0.79	g4206201	70	955	1.1e-94	(AF071527) hypothetical protein [Arabidopsis thaliana]
154363	ATU016303	ATL8C18877:1236..121	gap2	ATCEA4S2300	93	ATL8C18877:1068..122	0.74	g3249067	70	287	8.1e-24	(AC004473) T13D8.7 [Arabi

												dopsis thaliana]
154364	ATU016304	ATL8C35482:42..1279	gap2	ATCEA4C69751_1	93	ATL8C35482:238..1133	0.65	g3337357	69	610	1.3e-65	(AC004481) hypothetical protein [Arabidopsis thaliana]
154365	ATU016305	ATL8C6773:1534..1	gap2	ATCEA4C27384_2, ATCEA4C137739_1, ATCEA4S30474	93, 86, 83	ATL8C6773:1512..171	0.63	g4262234	69	952	1.0e-95	(AC006200) unknown protein [Arabidopsis thaliana]
154366	ATU016306	ATL8C21808:261..1476	gap2	ATCEA4C14951_1	93			g4538902	69	458	2.6e-49	(AL049482) rab7-like protein [Arabidopsis thaliana]
154367	ATU016307	ATL8C37248:1786..845	gap2	ATCEA4C7922_1, ATCEA4C114093_1	93, 87			g4115538	69	562		(AB012116) UDP-glycose:flavonoid glycosyltransferase [Vigna mungo]

154368	ATU016308	ATL8C36261:1..3034	gap2	ATCEA4S3903	93			g4467123, g4467124	69, 53	418, 601	8.8e-46, 9.0e-64	(AL035538) hypothetical protein [Arabidopsis thaliana]; (AL035538) hypothetical protein [Arabidopsis thaliana]
154369	ATU016309	ATL8C17076:3010..3470	gap2	ATCEA4S33631, ATCEA4S34060	93, 87			g3377812	69	78	2.8e-05	(AF076275) contains similarity to heavy-metal-associated domain containing proteins (Pfam: HMA.hm, score: 12.02) [Arabidopsis thaliana]

154370	ATU016310	ATL8S18486:480..1	gap2	ATCEA4S30772, ATCEA4C119820_1	93, 86	ATL8S18486:361..46	0.97	g3096944	68	116	2.2e-09	(AL023094) putative protein [Arabidopsis thaliana]
154371	ATU016311	ATL8C5355:1..3212	gap2	ATCEA4C120226_1	93	ATL8C5355:383..3212	0.72	g2982444, g2252834	68, 59	2915, 199	7.5e-261, 3.5e-10	(AL022224) CLV1 receptor kinase like protein [Arabidopsis thaliana]; (AF013293) similar to light repressible receptor protein kinase [Arabidopsis thaliana]
154372	ATU016312	ATL8C40403:48..608	gap2	ATCEA4C2682_3, ATCEA4C2682_14,	93, 85, 82			g2829899	68	217	3.3e-19	(AC002311) similar to ripening-

SEQUENCE LISTING

				ATCEA4C2682_6								induced protein, gp|AJ001449|2465015 and major# latex protein, gp|X91961|1107495 [Arabidopsis thaliana]
154373	ATU016313	ATL8C44273:1..901	gap2	ATCEA4C82974_1	93			g2191163	68	1445	1.9e-148	(AF007270) contains similarity to beta transducins [Arabidopsis thaliana]
154374	ATU016314	ATL8C13708:1..1408	gap2	ATCEA4S34415	93	ATL8C13708:111..685	0.76	g2435517	67	305	3.9e-30	(AF024504) contains similarity to peptidase family A1 [Arabi

												dopsis thaliana]
154375	ATU016315	ATL8C35785:1206..2482	gap2	ATCEA4C5663_1	93			g4337206	67	163	3.4e-07	(AC006403) putative replication factor-A protein [Arabidopsis thaliana]
154376	ATU016316	ATL8S2330:1..476	gap2	ATCEA4S30262	93			g2194133	67	347	9.5e-20	(AC002062) No definition line found [Arabidopsis thaliana]
154377	ATU016317	ATL8C16704:3217..1	gap2	ATCEA4C117686_1	93	ATL8C16704:3123..64	0.72	g1353239	66	2560	3.4e-277	(U10245) putative RNA helicase A [Arabidopsis thaliana]
154378	ATU016318	ATL8C17251:2874..5222	gap2	ATCEA4S34929	93			g4559339	66	1893	1.3e-148	(AC007087) putative ATP-dependent

												RNA helicase [Arabidopsis thaliana]
154379	ATU0161319	ATL8C35006:1021..1466	gap2	ATCEA4C11709_1	93	ATL8C35006:1065..1436	0.95	g2673920	65	439	2.3e-27	(AC002561) similar to Drosophila couch potato protein [Arabidopsis thaliana]
154380	ATU0161320	ATL8C37218:1..1486	gap2	ATCEA4S24721, ATCEA4S34940, ATCEA4S24789	93, 88, 82	ATL8C37218:68..1252	0.61	g2980792	65	1913		(AL022197) putative protein [Arabidopsis thaliana]
154381	ATU0161321	ATL8C24894:1..1285	gap2	ATCEA4S8148	93	ATL8C24894:1125..1285	0.57	g1711507	65	176	3.3e-10	SIGNAL RECOGNITION PARTICLE 19 KD PROTEIN (SRP19) [Oryza sativa]
154382	ATU016	ATL8C1	gap2	ATCEA4	93			g40380	65	1825	3.8e-	(AC005

	322	8949:733..2958		S126				56			193	897) putative transposon [Arabidopsis thaliana]
154383	ATU016323	ATL8C20004:1627..159	gap2	ATCEA4S1402	93	ATL8C20004:1570..159	0.97	g4455680	64	431		(AL035472) putative prolyl tRNA synthetase [Mycobacterium leprae]
154384	ATU016324	ATL8C49071:1..1164	gap2	ATCEA4S34355	93			g1669664	64	253	5.9e-22	(Z49706) GTP cyclohydrolase I [Dictyostelium discoideum]
154385	ATU016325	ATL8C12562:1..779	gap2	ATCEA4S4409	93			g4262175	64	463	2.7e-42	(AC005508) 12894 [Arabidopsis thaliana]
154386	ATU016326	ATL8C3870:1..2645	gap2	ATCEA4C119469_1	93	ATL8C3870:366..1714	0.62	g2459447	63	966	1.5e-75	(AC002332) putative Mlo protein

												[Arabidopsis thaliana]
154387	ATU016327	ATL8C37770:726..2105	gap2	ATCEA4C26161_1, ATCEA4S7241	93, 85			g4585993	63	280	2.8e-18	(AC005287) Similar to serine/threonine kinases [Arabidopsis thaliana]
154388	ATU016328	ATL8C12179:1..2071	gap2	ATCEA4S33574, ATCEA4S31518, ATCEA4S33544	93, 87, 84	ATL8C12179:1..1799	0.89	g3582340	62	734	6.9e-74	(AC005496) unknown protein [Arabidopsis thaliana]
154389	ATU016329	ATL8C16152:241..2038	gap2	ATCEA4S34979	93	ATL8C16152:253..2019	0.85	g1076634	62	729	3.7e-42	protein-serine/threonine kinase NPK15 - common tobacco [Nicotiana tabacum]
154390	ATU016330	ATL8C41033:1641..1	gap2	ATCEA4S28616,	93, 88	ATL8C41033:1088..1	0.83	g2462760	62	99	0.0014	(AC002292) Hypoth

				ATCEA4S35534		81						etical protein [Arabidopsis thaliana]
154391	ATU016331	ATL8S9263:58..543	gap2	ATCEA4C44224_1, ATCEA4S32466	93, 88			g4678384	62	624	1.5e-37	(AL049656) putative protein [Arabidopsis thaliana]
154392	ATU016332	ATL8C48598:1547..204	gap2	ATCEA4S31198, ATCEA4S35047	93, 87	ATL8C48598:1304..252	0.85	g4006917	61	859	8.4e-69	(Z99708) putative protein [Arabidopsis thaliana]
154393	ATU016333	ATL8S15674:532..1	gap2	ATCEA4C1858_1, ATCEA4C1858_2	93, 91	ATL8S15674:345..195	0.82	g4432815	61	345	3.7e-32	(AC006593) actin depolymerizing factor 6 [Arabidopsis thaliana]
154394	ATU016334	ATL8C2604:1552..129	gap2	ATCEA4C34000_1	93	ATL8C2604:1461..129	0.74	g3738302	61	486	3.7e-43	(AC005309) tubby-like protein

												[Arabidopsis thaliana]
154395	ATU016335	ATL8C36622:1..1370	gap2	ATCEA4C43870_1	93	ATL8C36622:109..1370	0.57	g4559388	61	735	5.2e-42	(AC006526) hypothetical protein [Arabidopsis thaliana]
154396	ATU016336	ATL8C5706:801..1593	gap2	ATCEA4S35834	93			g2275200	61	353		(AC002337) polyribonucleotide phosphorylase isolog [Arabidopsis thaliana]
154397	ATU016337	ATL8C48135:1315..1	gap2	ATCEA4S2493	93	ATL8C48135:1119..66	0.99	g4262228	59	989	2.4e-107	(AC006200) putative receptor protein kinase [Arabidopsis thaliana]
154398	ATU016338	ATL8C35223:1..270	gap2	ATCEA4C43470_1	93			g1041815	59	140	1.3e-07	(U16721) lipid transfer

												protein [Oryza sativa]
154399	ATU016339	ATL8C36950:1..2035	gap2	ATCEA4S33525, ATCEA4C2848_1	93, 88	ATL8C36950:47..1855	0.77	g3687228	58	1244	2.0e-98	(AC005169) putative malate dehydrogenase [Arabidopsis thaliana]
154400	ATU016340	ATL8C22392:4..1173	gap2	ATCEA4S12998	93	ATL8C22392:4..1012	0.63	g3128169	58	211	1.1e-16	(AC004521) hypothetical protein [Arabidopsis thaliana]
154401	ATU016341	ATL8C15073:20..670	gap2	ATCEA4C138132_1, ATCEA4S30914, ATCEA4C41328_1	93, 88, 86	ATL8C15073:41..555	0.89	g1903360	57	471	8.3e-51	(AC000104) Similar to Arabidopsis 2A6 (gb|X83096). EST gb|T76913 comes from this gene. [Arabidopsis

												thaliana]
154402	ATU016342	ATL8C12185:947..1	gap2	ATCEA4S30961, ATCEA4S10867	93, 89	ATL8C12185:783..21	0.88	g2129636	57	841	1.6e-81	lipase - Arabidopsis thaliana [Arabidopsis thaliana]
154403	ATU016343	ATL8C15967:4650..1	gap2	ATCEA4S10330	93	ATL8C15967:4650..456	0.84	g3876622	57	137	0.18	(Z81523) Similarity to Yeast SOH-1 protein (SW:P38633) [Caenorhabditis elegans]
154404	ATU016344	ATL8C46158:30..1602	gap2	ATCEA4C7009_1	93	ATL8C46158:1029..1478	0.82	g2809251	57	1114	1.8e-105	(AC002560) F21B7.20 [Arabidopsis thaliana]
154405	ATU016345	ATL8C6201:2735..1	gap2	ATCEA4C1714_1	93	ATL8C6201:2588..72	0.82	g2245030	57	2114	1.6e-181	(Z97341) apetala2 domain TINY homolog [Arabi

CLASSIFIED SECTION

												dopsis thaliana]
154406	ATU016346	ATL8C4378:1185..423	gap2	ATCEA4C98152_2, ATCEA4S24407	93, 93	ATL8C4378:1139..522	0.66	g3608412	57	431	1.2e-44	(AF079355) protein phosphatase-2c [Mesembryanthemum crystallinum]
154407	ATU016347	ATL8C19797:1..2187	gap2	ATCEA4S6326, ATCEA4S34078	93, 90	ATL8C19797:61..282	0.52	g3367527	57	130	0.0029	(AC004392) Strong similarity to [Arabidopsis thaliana]
154408	ATU016348	ATL8C43655:467..3148	gap2	ATCEA4S19236	93			g4678295	57	429		(AL049655) putative protein [Arabidopsis thaliana]
154409	ATU016349	ATL8S14984:1..620	gap2	ATCEA4C236_1	93	ATL8S14984:512..595	0.96	g114085	56	531	4.7e-30	RAS-RELATED PROTEIN ARA-1 [Arabidopsis thalia

												na]
154410	ATU016350	ATL8C34281:243..1637	gap2	ATCEA4C685_3	93	ATL8C34281:735..1568	0.91	g3776021	56	1060	2.1e-93	(AJ010472) RNA helicase [Arabidopsis thaliana]
154411	ATU016351	ATL8C25309:1322..284	gap2	ATCEA4S26877, ATCEA4S34072	93, 88	ATL8C25309:954..284	0.82	g3402719	56	1731	9.8e-171	(AC004261) unknown protein [Arabidopsis thaliana]
154412	ATU016352	ATL8C1523:392..1412	gap2	ATCEA4C119225_1	93			g4218120	56	544	2.3e-43	(AL035353) Proline-rich APG-like protein [Arabidopsis thaliana]
154413	ATU016353	ATL8C31935:127..1383	gap2	ATCEA4S13006, ATCEA4S12925	93, 82			g4544433	56	53	0.011	(AC006955) hypothetical protein [Arabidopsis thaliana]
154414	ATU016354	ATL8S30133:3	gap2	ATCEA4S1943	93			g2245083	56	602	2.1e-21	(Z97343)

		..734										hypothetical protein [Arabidopsis thaliana]
154415	ATU016355	ATL8S4000:564..1	gap2	ATCEA4S3129	93	ATL8S4000:474..46	0.89	g3004549	55	551	1.4e-52	(AC003673) unknown protein [Arabidopsis thaliana]
154416	ATU016356	ATL8C18984:1..662	gap2	ATCEA4S1206	93	ATL8C18984:146..611	0.83	g2911076	55	713	7.3e-59	(AL021960) putative protein [Arabidopsis thaliana]
154417	ATU016357	ATL8C35720:2149..333	gap2	ATCEA4S7514	93	ATL8C35720:1920..340	0.82	g2130082	55	966	2.3e-91	protein kinase Xa21 (EC 2.7.1.-) - rice [Oryza sativa]
154418	ATU016358	ATL8C8480:1..1580	gap2	ATCEA4S2409	93	ATL8C8480:168..1580	0.54	g1778143	55	121	2.2e-05	(U66401) phosphate/phosphoenolpyr

												uvate translocator precursor [Nicotiana tabacum]
154419	ATU016359	ATL8C46063:1..1347	gap2	ATCEA4C85238_1, ATCEA4C70512_1, ATCEA4S33004	93, 92, 91	ATL8C46063:57..468	0.97	g3006125	54	69	5.6e-05	(AJ004870) hypothetical protein [Thermoanaerobacterium thermosaccharolyticum]
154420	ATU016360	ATL8C21760:1..2153	gap2	ATCEA4S28207, ATCEA4C12164_1	93, 85	ATL8C21760:241..1198	0.90	g1346057	54	581	6.9e-62	PROTEIN KINASE G11A [Oryza sativa]
154421	ATU016361	ATL8C38574:923..1	gap2	ATCEA4S8223	93	ATL8C38574:923..54	0.80	g3080365	54	258	4.0e-30	(AL022580) putative protein [Arabidopsis thaliana]
154422	ATU016362	ATL8C34603:208..947	gap2	ATCEA4C7374_1	93	ATL8C34603:226..857	0.76	g2618689	54	779	3.4e-75	(AC002510) unknown protei

												n [Arabidopsis thaliana]
154423	ATU0163 63	ATL8C34304:1..1214	gap2	ATCEA4S30180	93	ATL8C34304:423..848	0.71	g2500047	54	349	1.9e-37	SOLUBLE INORGANIC PYROPHOSPHATASE (PYROPHOSPHATE PHOSPHO-HYDROLASE) (PPASE) [Solanum tuberosum]
154424	ATU0163 64	ATL8C12086:2838..3923	gap2	ATCEA4C19250_1	93	ATL8C12086:2956..3658	0.59	g4115943	54	1127	3.3e-101	(AF118223) contains similarity to eukaryotic protein kinase domains (Pfam: PF00069, score=312.6, E=4.7e

												-90, N=1) and EF hand domains (Pfam: PF00036, score=131, E=2.1e-35, N=4) [Arabidopsis thaliana]
154425	ATU0163 65	ATL8C40247:1949..2756	gap2	ATCEA4S253	93	ATL8C40247:2666..2498	0.50	g4773910	54	330	1.1e-32	(AF147259) No definition line found [Arabidopsis thaliana]
154426	ATU0163 66	ATL8C27354:705..2231	gap2	ATCEA4S1751	93			g4539292	54	263		(AL049480) putative ribosomal protein S10 [Arabidopsis thaliana]
154427	ATU0163 67	ATL8C9762:3286..3979	gap2	ATCEA4S34177	93			g4185144	54	532	3.8e-52	(AC005724) unknown

												protein [Arabidopsis thaliana]
154428	ATU016368	ATL8C48465:675..395	gap2	ATCEA4C3982_4, ATCEA4C3982_5, ATCEA4C3982_3	93, 85, 85			g2500378	54	207	1.3e-18	60S RIBOSOMAL PROTEIN L37 []
154429	ATU016369	ATL8S1298:1..568	gap2	ATCEA4S9930	93			g3080441	54	152	1.1e-11	(AL022605) putative protein [Arabidopsis thaliana]
154430	ATU016370	ATL8S22704:606..1	gap2	ATCEA4C5058_1, ATCEA4S8132	93, 87			g2829922	54	934	3.0e-10	(AC002291) extensin [Arabidopsis thaliana]
154431	ATU016371	ATL8C44395:2290..1	gap2	ATCEA4S3693	93	ATL8C44395:2284..1691	0.83	g3080404	53	839	6.3e-72	(AL022603) putative protein [Arabidopsis thaliana]
154432	ATU016	ATL8C3	gap2	ATCEA4	93	ATL8C3	0.81	g32876	53	644	3.3e-	(AC003

	372	7015:923..1		C60816_1		7015:923..273		85			50	979) Strong similarity to hypothetical protein gb|Y09823 from A. thaliana. ESTs gb|T76118, gb|T04263 and gb|ATYU9823 come from this gene. [Arabidopsis thaliana].
154433	ATU016373	ATL8S11067:393..1	gap2	ATCEA4C36239_1	93	ATL8S11067:333..60	0.72	g3080400	53	430	1.5e-39	(AL022603) putative protein [Arabidopsis thaliana]
154434	ATU016374	ATL8S8482:93..649	gap2	ATCEA4C43628_2, ATCEA4	93, 93	ATL8S8482:519..221	0.55	g3004547	53	522	3.7e-24	(AC003673) unknown

				C43628_1								protein [Arabidopsis thaliana]
154435	ATU016375	ATL8C47610:705..1884	gap2	ATCEA4C69779_1	93			g4585908	53	768	1.8e-64	(AC006298) putative lysosomal acid lipase [Arabidopsis thaliana]
154436	ATU016376	ATL8C38110:901..1	gap2	ATCEA4C10062_1	93			g2392769	53	501	5.1e-48	(AC002534) putative histone deacetylase [Arabidopsis thaliana]
154437	ATU016377	ATL8C23510:992..1	gap2	ATCEA4C6205_1	93	ATL8C23510:871..20	0.82	g4103152	52	942	1.0e-99	(AF020716) histidyl-tRNA synthetase [Triticum aestivum]
154438	ATU016378	ATL8C10188:2910..103	gap2	ATCEA4C114722_1, ATCEA4	93, 91	ATL8C10188:2803..820	0.54	g3153237	52	201		(AF047852) terminal

				C74194_1								ear1 [Zea mays]
154439	ATU016379	ATL8S13268:520..1	gap2	ATCEA4S434	93			g3414930	52	52	0.024	(AF076599) FutA [Dictyostelium discoideum]
154440	ATU016380	ATL8C18485:1..3008	gap2	ATCEA4S22298, ATCEA4S22297	93, 83			g4544376, g2245115	52, 51	1017, 265	1.5e-96, 2.6e-21	(AC006920) unknown protein [Arabidopsis thaliana]; (Z97343) unnamed protein product [Arabidopsis thaliana]
154441	ATU016381	ATL8C6484:1..1518	gap2	ATCEA4S30707, ATCEA4S35137	93, 91	ATL8C6484:208..1479	0.91	g2244956	51	1107	3.9e-116	(Z97340) strong similarity to pectinesterase [Arabidopsis thalia

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154442	ATU016382	ATL8C14878:1..547	gap2	ATCEA4C54875_1	93	ATL8C14878:17..547	0.57	g3080401	51	715	1.3e-37	(AL022603) putative protein [Arabidopsis thaliana]
154443	ATU016383	ATL8C34864:1513..3613	gap2	ATCEA4C72286_1	93			g3164136	51	543	4.5e-52	(D78603) cytochrome P450 monooxygenase [Arabidopsis thaliana]
154444	ATU016384	ATL8C43382:925..217	gap2	ATCEA4S13921	93			g2982460	51	253	6.3e-17	(AL022223) hypothetical protein [Arabidopsis thaliana]
154445	ATU016385	ATL8C21921:1..2959	gap2	ATCEA4S17307	93	ATL8C21921:2939..2509	0.97	g4468104	50	1265	1.6e-138	(AL022223) hypothetical protein [Arabidopsis thaliana]
154446	ATU016	ATL8C1	gap2	ATCEA4	93,	ATL8C1	0.92	g48368	50	629	1.1e-	(AC007

	386	0732:2734..1490		C30740_2, ATCEA4C61358_1, ATCEA4S23059, ATCEA4S35306	91, 87, 86	0732:2622..1950		71			25	260) lcl|prt_seq No definition line found [Arabidopsis thaliana]
154447	ATU016387	ATL8C16509:1342..1	gap2	ATCEA4C1915_1	93	ATL8C16509:1185..567	0.86	g2129539	50	641	1.9e-59	AtJ1 protein - Arabidopsis thaliana [Arabidopsis thaliana]
154448	ATU016388	ATL8C4855:1119..1	gap2	ATCEA4C41300_1	93	ATL8C4855:629..107	0.70	g2828281	50	321	3.3e-33	(AL021687) hypothetical protein [Arabidopsis thaliana]
154449	ATU016389	ATL8C7379:1302..1	gap2	ATCEA4C37281_1, ATCEA4S926	93, 82	ATL8C7379:1302..8	0.66	g2947062	50	867	1.2e-84	(AC002521) unknown protein [Arabidopsis thaliana]
154450	ATU016390	ATL8C35348:1	gap2	ATCEA4C937_2	93, 82			g2924792	50	525	1.3e-49	(AC002334)

		018..1950		, ATCEA4C937_3								similar to synaptobrevin [Arabidopsis thaliana]
154451	ATU016391	ATL8C21547:1..774	gap2	ATCEA4S24864	93			g4835229	50	1105	5.3e-97	(AL049862) putative protein [Arabidopsis thaliana]
154452	ATU016392	ATL8C44190:304..1062	gap2	ATCEA4S7480	93	ATL8C44190:304..954	0.87	g4558564	49	1040	6.7e-92	(AC007138) predicted protein of unknown function [Arabidopsis thaliana]
154453	ATU016393	ATL8C3860:1185..38	gap2	ATCEA4S35982	93	ATL8C3860:795..39	0.69	g4544403	49	735	1.0e-70	(AC007047) putative glucan endo-1,3-beta-D-glucosidase precur

												sor [Arabidopsis thaliana]
154454	ATU016394	ATL8C30142:2463..781	gap2	ATCEA4C119008_1, ATCEA4S4453	93, 93	ATL8C30142:2232..1289	0.82	g1246823	48	588	1.7e-47	(X89865) unknown [Phoenix dactylifera]
154455	ATU016395	ATL8C25288:1..931	gap2	ATCEA4C116951_1	93	ATL8C25288:187..931	0.81	g4468984	48	435	2.1e-38	(AL035605) putative protein [Arabidopsis thaliana]
154456	ATU016396	ATL8C23322:1709..2474	gap2	ATCEA4S1825	93	ATL8C23322:2248..2124	0.45	g1351184	48	264	2.8e-22	TYROSYL-TRNA SYNTHETASE, MITOCHONDRIAL PRECURSOR (TYROSINE--TRNA LIGASE) (TYRRS) [Saccharomyces cerevisiae]
154457	ATU016	ATL8C3	gap2	ATCEA4	93, 92	ATL8C3	0.75	g49144	47	1206	2.4e-	(AL050

	397	8685:1..1680		S1569, ATCEA4S5294		8685:139..1608		19			122	352) putative protein [Arabidopsis thaliana]
154458	ATU016398	ATL8C44087:944..1	gap2	ATCEA4C119007_1	93	ATL8C44087:944..29	0.71	g1246823	47	493	1.1e-36	(X89865) unknown [Phoenix dactylifera]
154459	ATU016399	ATL8S23288:819..195	gap2	ATCEA4C120218_3	93			g1706319	47	490	2.9e-51	HISTIDINE DECARBOXYLASE (HDC) (TOM92), [Lycopersicon esculentum]
154460	ATU016400	ATL8C39736:1..789	gap2	ATCEA4C3460_1, ATCEA4S29596	93, 85	ATL8C39736:112..682	0.99	g2702281	46	432	4.4e-29	(AC003033) putative protein disulfide isomerase precursor [Arabidopsis thalia

												na]
154461	ATU016401	ATL8C46345:835..1	gap2	ATCEA4C136735_1, ATCEA4S31291, ATCEA4S24945	93, 90, 89	ATL8C46345:705..41	0.79	g3763930	46	923	2.8e-88	(AC004450) unknown protein [Arabidopsis thaliana]
154462	ATU016402	ATL8C38584:1264..870	gap2	ATCEA4C2789_1	93			g3288599	46	100	2.5e-06	(AJ004912) integral membrane protein, Tmp21-I (p23) [Rattus norvegicus]
154463	ATU016403	ATL8C9063:171..662	gap2	ATCEA4S35828	93			g4371281	46	328		(AC006260) hypothetical protein [Arabidopsis thaliana]
154464	ATU016404	ATL8C38951:1121..1	gap2	ATCEA4S26655	93	ATL8C38951:1064..149	0.83	g2462748	45	774	5.1e-74	(AC002292) putative Clathrin Coat Assembly

												protein [Arabidopsis thaliana]
154465	ATU0164 05	ATL8C27632:2125..90	gap2	ATCEA4S18400, ATCEA4C30775_1	93, 85	ATL8C27632:1511..206	0.60	g2651296, g3451074	45, 35	97, 800		(AC002336) b-zip DNA-binding protein [Arabidopsis thaliana]; (AL031326) putative protein [Arabidopsis thaliana]
154466	ATU0164 06	ATL8C4407:39..660	gap2	ATCEA4C101343_1	93	ATL8C4407:135..528	0.55	g4755189	45	568	1.0e-40	(AC007018) putative cytochrome P450 [Arabidopsis thaliana]
154467	ATU0164 07	ATL8C26679:136..741	gap2	ATCEA4C131180_1, ATCEA4S35862	93, 90	ATL8C26679:165..636	0.43	g1621268	45	458	3.1e-46	(Z81012) unknown [Ricinus

												commun is]
154468	ATU016 408	ATL8S1 6794:5 7..556	gap2	ATCEA4 S10313	93	ATL8S1 6794:2 18..32 4	0.41	g34111 52	45	285	9.3e-26	(AF066 050) thymid ine kinase [Oryza sativa]
154469	ATU016 409	ATL8C1 7001:1 ..3496	gap2	ATCEA4 S25849 , ATCEA4 S25842 , ATCEA4 C67796 _1, ATCEA4 S18461	93, 91, 90, 89	ATL8C1 7001:5 3..299 8	0.41	g31281 71	45	912	1.9e-91	(AC004 521) putati ve protei nase [Arabi dopsis thalia na]
154470	ATU016 410	ATL8C1 2559:1 ..2609	gap2	ATCEA4 C11624 6_1	93			g25586 60	45	584	5.0e-51	(AC002 354) No defini tion line found [Arabi dopsis thalia na]
154471	ATU016 411	ATL8C1 1345:1 ..1115	gap2	ATCEA4 S957	93	ATL8C1 1345:5 7..979	0.87	g21911 72	44	1033	4.8e-107	(AF007 270) contai ns simila rity to GATA-type zinc finger s (PS:PS

												00344) [Arabidopsis thaliana]
154472	ATU016412	ATL8C738:1..1149	gap2	ATCEA4S5298	93	ATL8C738:52..1060	0.84	g4567304	44	438	8.2e-32	(AC005956) unknown protein [Arabidopsis thaliana]
154473	ATU016413	ATL8C25161:1294..1	gap2	ATCEA4S31514	93	ATL8C25161:1201..73	0.75	g3157933	44	1563	1.6e-122	(AC002131) Contains similarity to box helicases gb|U29097 from C. elegans and to the ENBP1 gene product gb|X95995 from Vicia sativa. [Arabidopsis thaliana]

154474	ATU0164 14	ATL8C42408:7061..1	gap2	ATCEA4S11160, ATCEA4C53580_1	93, 88	ATL8C42408:7061..45	0.68	g2275200, g3249067	44, 42	195, 112	3.9e-18, 0.078	(AC002337) polyribonucleotide phosphorylase isolog [Arabidopsis thaliana]; (AC004473) T13D8.7 [Arabidopsis thaliana]
154475	ATU0164 15	ATL8C38611:1..1143	gap2	ATCEA4C453_1	93	ATL8C38611:227..1136	0.47	g1769887	44	901	2.2e-89	(X95736) amino acid permease 6 [Arabidopsis thaliana]
154476	ATU0164 16	ATL8C33594:1..565	gap2	ATCEA4S5786	93	ATL8C33594:399..565	0.46	g3935174	44	266	2.6e-17	(AC004557) F17L21.17 [Arabidopsis thaliana]
154477	ATU0164 17	ATL8S16610:1..458	gap2	ATCEA4S36320	93			g1934741	44	737	1.8e-68	(Y10013) putative transcriptio

												n factor [Arabidopsis thaliana]
154478	ATU016418	ATL8C23230:705..224	gap2	ATCEA4C100709_1	93			g3927829	44	670	6.3e-50	(AC005727) putative zinc finger protein [Arabidopsis thaliana]
154479	ATU016419	ATL8C12459:323..1	gap2	ATCEA4C396_1	93			g3164222	43	517	2.1e-49	(AB008518) RMA1 [Arabidopsis thaliana]
154480	ATU016420	ATL8S27032:529..1	gap2	ATCEA4C105889_1	93	ATL8S27032:302..80	0.89	g3297815	42	440	1.5e-36	(AL031032) putative protein [Arabidopsis thaliana]
154481	ATU016421	ATL8C43672:3486..464	gap2	ATCEA4S4651	93	ATL8C43672:3472..464	0.87	g4262222	42	979		(AC006200) putative RNA helicase A, 3' partial [Arabi

												dopsis thaliana]
154482	ATU016422	ATL8C43961:1..1547	gap2	ATCEA4S7887	93	ATL8C43961:906..776	0.50	g3776564	42	529		(AC005388) Similar to hypothetical protein T1D16.16 [Arabidopsis thaliana]
154483	ATU016423	ATL8C43821:1..619	gap2	ATCEA4S36377	93	ATL8C43821:94..427	0.47	g1703219	42	442		AIG1 PROTEIN [Arabidopsis thaliana]
154484	ATU016424	ATL8C24496:576..1	gap2	ATCEA4C21267_1	93			g3540181	42	943	2.7e-71	(AC004122) Unknown protein [Arabidopsis thaliana]
154485	ATU016425	ATL8C39376:579..1	gap2	ATCEA4S31298	93			g1469228	42	435	8.3e-40	(Z74841) hypothetical protein [Brassica oleracea]

154486	ATU016426	ATL8C37171:1..2006	gap2	ATCEA4C135805_1	93	ATL8C37171:430..1800	0.98	g3047127	41	870		(AF058919) No definition line found [Arabidopsis thaliana]
154487	ATU016427	ATL8S5284:1..403	gap2	ATCEA4S16244, ATCEA4C1965_1, ATCEA4C1965_5	93, 90, 82	ATL8S5284:77..156	0.92	g1703220	41	212	5.4e-20	AIG2 PROTEIN [Arabidopsis thaliana]
154488	ATU016428	ATL8C35814:1..697	gap2	ATCEA4S35309, ATCEA4S17760, ATCEA4S13955	93, 86, 82	ATL8C35814:63..630	0.83	g3287693	41	833	1.1e-86	(AC003979) Similar to LIM17 gene product gb|1653769 from the genome of Synechocystis sp. gb|D90916. [Arabidopsis thaliana]
154489	ATU016429	ATL8C1963:86	gap2	ATCEA4C74115	93	ATL8C1963:86	0.72	g2462827	41	907	6.4e-86	(AF000657)

		9..1		_1		9..27						probable thiamin biosynthetic enzyme [Arabidopsis thaliana]
154490	ATU016430	ATL8C4168:301..1460	gap2	ATCEA4C10506_1	93	ATL8C4168:311..1438	0.69	g3806098	41	641	5.9e-70	(AF079100) arginine-tRNA-protein transferase 1; Ate1p [Arabidopsis thaliana]
154491	ATU016431	ATL8C28474:1..1495	gap2	ATCEA4C2093_1, ATCEA4S21484	93, 89	ATL8C28474:250..1398	0.67	g2661179	41	1060	6.2e-107	(U80984) AtZW10 [Arabidopsis thaliana]
154492	ATU016432	ATL8C9724:1..587	gap2	ATCEA4S29531, ATCEA4C9467_1	93, 87	ATL8C9724:70..448	0.56	g2911049	41	772	3.4e-74	(AL021961) glucosyltransferase - like protein [Arabidopsis thalia

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154493	ATU0164 33	ATL8C26 483:424..1	gap2	ATCEA4C4753_1	93	ATL8C26 483:372..39	0.45	g1483222	41	450	1.6e-44	(X99097) peroxidase [Arabidopsis thaliana]
154494	ATU0164 34	ATL8C11833:323..1024	gap2	ATCEA4C7968_1	93			g2213591	41	800	2.7e-79	(AC000348) T7N9.11 [Arabidopsis thaliana]
154495	ATU0164 35	ATL8S18213:1..624	gap2	ATCEA4S4190	93			g3128211	41	931	3.6e-89	(AC004077) putative cytochrome p450 protein [Arabidopsis thaliana]
154496	ATU0164 36	ATL8C15602:930..3313	gap2	ATCEA4C28917_1, ATCEA4S18553	93, 83			g1652971	41	61	8.3e-05	(D90910) hypothetical protein [Synechocystis sp.]
154497	ATU0164 37	ATL8C14283:606..1408	gap2	ATCEA4C19610_1	93	ATL8C14283:606..1382	0.90	g114121	40	170	2.8e-14	ADP-RIBOSYLATION FACTOR

												1 [Saccharomyces cerevisiae]
154498	ATU0164 38	ATL8C32211:1..833	gap2	ATCEA4C25029_2, ATCEA4C34299_1	93, 83	ATL8C32211:370..602	0.73	g4539422	40	190	8.4e-08	(AL049171) putative protein [Arabidopsis thaliana]
154499	ATU0164 39	ATL8C23613:1..795	gap2	ATCEA4C4713_1	93	ATL8C23613:87..127	0.56	g4455250	40	129	2.1e-06	(AL035523) putative protein [Arabidopsis thaliana]
154500	ATU0164 40	ATL8C3132:1056..1	gap2	ATCEA4S6259	93	ATL8C3132:890..10	0.89	g4850401	39	512	1.4e-32	(AC007357) Strong similarity to gb|U29610 Actin-like protein (Arp3) from Acanthamoeba castellanii and is

												a member of the PF|00022 Actin family. [Arabidopsis thaliana]
154501	ATU016441	ATL8C5968:1..3546	gap2	ATCEA4C128822_1	93	ATL8C5968:348..3546	0.75	g4138166	39	163		(AJ005341) MLO [Linum usitatissimum]
154502	ATU016442	ATL8C17584:854..1	gap2	ATCEA4S4278	93	ATL8C17584:846..156	0.75	g2244834	39	993	1.8e-103	(Z97337) hypothetical protein [Arabidopsis thaliana]
154503	ATU016443	ATL8C39134:1186..349	gap2	ATCEA4C148213_1	93	ATL8C39134:840..409	0.69	g2795806	39	691	7.3e-74	(AC003674) unknown protein [Arabidopsis thaliana]
154504	ATU016444	ATL8C25551:72..1408	gap2	ATCEA4S18435	93	ATL8C25551:72..1402	0.57	g1723232	39	326	2.8e-26	HYPOTHETICAL 90.6 KD PROTEIN

												C1D4.10 IN CHROMOSOME I [Schizosaccharomyces pombe]
154505	ATU016445	ATL8C3275:2957..3806	gap2	ATCEA4S34400	93			g4914410	39	513	3.1e-43	(AL050352) putative protein [Arabidopsis thaliana]
154506	ATU016446	ATL8S27815:585..218	gap2	ATCEA4C35398_2	93			g4220481	39	218	7.5e-20	(AC006069) unknown protein [Arabidopsis thaliana]
154507	ATU016447	ATL8C35676:1121..1	gap2	ATCEA4C4716_1, ATCEA4S30211, ATCEA4C23096_1	93, 87, 82	ATL8C35676:1088..254	0.99	g3947735	38	395	2.0e-37	(AJ009720) NL27 [Solanum tuberosum]
154508	ATU016448	ATL8C7543:1..1002	gap2	ATCEA4S36348	93	ATL8C7543:304..782	0.96	g2865428	38	886	1.7e-99	(AF039372) chromomethylase [Arabidopsis

												thaliana]
154509	ATU016449	ATL8C39052:21..724	gap2	ATCEA4S7817	93	ATL8C39052:105..674	0.79	g1103322	38	322	5.8e-26	(X788220) casein kinase I [Arabidopsis thaliana]
154510	ATU016450	ATL8C27461:1..731	gap2	ATCEA4S12929, ATCEA4C69165_1	93, 92	ATL8C27461:470..614	0.79	g3269299	38	219		(AL030978) hypothetical protein [Arabidopsis thaliana]
154511	ATU016451	ATL8C46562:2621..1823	gap2	ATCEA4S35981	93	ATL8C46562:2592..1845	0.78	g3805964	38	537	1.5e-50	(Y13773) laccase [Populus balsamifera subsp. trichocarpa]
154512	ATU016452	ATL8S4152:1..589	gap2	ATCEA4C31689_1	93	ATL8S4152:53..145	0.70	g4580461	38	210	3.3e-19	(AC006081) unknown protein [Arabidopsis thaliana]
154513	ATU016453	ATL8C26:546.	gap2	ATCEA4C46063	93			g2317906	38	420	2.5e-26	(U89959)

		.1		_1								ARA-5 [Arabidopsis thaliana]
154514	ATU016454	ATL8C43383:1..348	gap2	ATCEA4C1548_14	93			g4454036	38	187		(AL035394) putative major latex protein [Arabidopsis thaliana]
154515	ATU016455	ATL8C47904:149..2035	gap2	ATCEA4C9113_1, ATCEA4C14373_1	93, 87	ATL8C47904:595..1924	0.94	g3176726	37	1224	3.9e-107	(AC002392) putative serine proteinase [Arabidopsis thaliana]
154516	ATU016456	ATL8C38734:64..926	gap2	ATCEA4C5380_1, ATCEA4C5380_5, ATCEA4C5380_3	93, 87, 86	ATL8C38734:465..875	0.85	g4581146	37	490	2.3e-50	(AC006919) putative fructose-bisphosphate aldolase, cytoplasmic [Arabidopsis thaliana]
154517	ATU016	ATL8C3	gap2	ATCEA4	93	ATL8C3	0.69	g49144	37	1532	2.4e-	(AL050

	457	6380:2388..1		C5652_1		6380:2336..208		14			98	352) Ca2+-transporting ATPase-like protein [Arabidopsis thaliana]
154518	ATU016458	ATL8C34008:1..1156	gap2	ATCEA4S11168, ATCEA4C2115_1	93, 86	ATL8C34008:61..560	0.68	g2191178	37	759	5.7e-48	(AF007270) contains similarity to MIPP proteins [Arabidopsis thaliana]
154519	ATU016459	ATL8S22185:1..652	gap2	ATCEA4S2162	93	ATL8S22185:63..558	0.63	g1706318	37	562	9.9e-60	GLUTAMATE DECARBOXYLASE (GAD) (ERTD1) [Lycopersicon esculentum]
154520	ATU016460	ATL8C37594:1..686	gap2	ATCEA4S31707	93	ATL8C37594:20..686	0.61	g4584520	37	226	9.9e-13	(AL049607) enoyl-CoA hydratase-

												like protein [Arabidopsis thaliana]
154521	ATU016461	ATL8S18485:1..610	gap2	ATCEA4C18308_1, ATCEA4C21135_1, ATCEA4S18669	93, 92, 82	ATL8S18485:199..131	0.48	g728867	37	915	4.8e-24	ANTER-SPECIFIC PROLINE-RICH PROTEIN APG PRECURSOR [Arabidopsis thaliana]
154522	ATU016462	ATL8C5038:1..787	gap2	ATCEA4S30016	93	ATL8C5038:244..509	0.48	g4587526	37	818	4.4e-79	(AC007060) Strong similarity to F19I3.2 []
154523	ATU016463	ATL8C29645:2229..1	gap2	ATCEA4C116048_1	93			g4239845	37	636	6.9e-66	(AB015855) transcription factor TEIL [Nicotiana tabacum]
154524	ATU016464	ATL8C21360:311..1928	gap2	ATCEA4S25869	93			g3892045	37	80	1.2e-05	(AC002330) putative zinc finger

												protein [Arabidopsis thaliana]
154525	ATU016465	ATL8C29282:1416..1	gap2	ATCEA4C21561_1	93	ATL8C29282:907..276	0.92	g4732107	36	169	2.2e-06	(AF129082) COP9 complex homolog subunit 4 DCH4 [Drosophila melanogaster]
154526	ATU016466	ATL8C6012:1..619	gap2	ATCEA4C80558_1, ATCEA4S11570	93, 90	ATL8C6012:266..599	0.87	g2262111	36	435	1.8e-40	(AC002343) ribitol dehydrogenase isolog [Arabidopsis thaliana]
154527	ATU016467	ATL8C37578:869..1	gap2	ATCEA4S26396, ATCEA4C17575_1	93, 87	ATL8C37578:818..80	0.83	g3322871	36	68	0.32	(AE001233) peptide chain release factor 2 (prfB) [Treponema

												pallidum]
154528	ATU0164 68	ATL8C34803:2913..2002	gap2	ATCEA4C73550_1	93	ATL8C34803:2759..2141	0.79	g3096922	36	87	0.11	(AL023094) putative protein [Arabidopsis thaliana]
154529	ATU0164 69	ATL8S5600:1..221	gap2	ATCEA4C11951_1	93			g4160579	36	45	0.034	(AL035218) hypothetical protein [Schizosaccharomyces pombe]
154530	ATU0164 70	ATL8C22314:1..821	gap2	ATCEA4S1006	93			g4263063	36	663	2.7e-61	(AC005142) hypothetical protein [Arabidopsis thaliana]
154531	ATU0164 71	ATL8C26599:1..1301	gap2	ATCEA4C18323_4, ATCEA4C18323_2	93, 92	ATL8C26599:299..1133	0.89	g1352075	35	1200	5.6e-123	BETA-GALACTOSIDASE PRECURSOR (LACTASE) [Brassica oleracea]

154532	ATU0164 72	ATL8C23032:1250..27	gap2	ATCEA4S739, ATCEA4S33266	93, 85	ATL8C23032:1059..148	0.66	g2132984	35	101	0.020	probable membrane protein YPL122c - yeast (Saccharomyces cerevisiae) [Saccharomyces cerevisiae]
154533	ATU0164 73	ATL8S5731:529..1	gap2	ATCEA4S25911, ATCEA4S25196	93, 91			g2392769	35	281	5.4e-23	(AC002534) putative histone deacetylase [Arabidopsis thaliana]
154534	ATU0164 74	ATL8C11471:401..1	gap2	ATCEA4C25036_1, ATCEA4S15252	93, 89			g3068705	35	320	6.0e-16	(AF049236) unknown [Arabidopsis thaliana]
154535	ATU0164 75	ATL8C9127:1282..162	gap2	ATCEA4S35097, ATCEA4C102569_1	93, 92			g3249067	35	101		(AC004473) T13D8.7 [Arabidopsis

												thaliana]
154536	ATU016476	ATL8C44999:1053..113	gap2	ATCEA4C116475_1	93	ATL8C44999:921..2511	0.99	g1458245	34	136	4.5e-05	(U64834) coded for by C. elegans cDNA cm17a1; coded for by C. elegans cDNA cm7g1; coded for by C. elegans cDNA CEMSE26F; similar to methyltransferases [Caenorhabditis elegans]
154537	ATU016477	ATL8C15239:694..1	gap2	ATCEA4S2088, ATCEA4S2426	93, 87	ATL8C15239:694..22	0.80	g3377814	34	892	2.5e-70	(AF076275) similar to protein kinases (Pfam: pkinase.hmm,

												score: 228.02) [Arabidopsis thaliana]
154538	ATU0161478	ATL8C1454:1..1146	gap2	ATCEA4S35450, ATCEA4C27065_1	93, 89	ATL8C1454:195..1091	0.79	g1929056	34	641	2.5e-52	(Y12090) putative 3,4-dihydroxy-2-butanone kinase [Lycopersicon esculentum]
154539	ATU0161479	ATL8C2424:779..1	gap2	ATCEA4C9919_1	93	ATL8C2424:715..246	0.50	g3885328	34	410	1.6e-34	(AC005623) putative serine/threonine protein kinase [Arabidopsis thaliana]
154540	ATU0161480	ATL8C45608:928..1	gap2	ATCEA4S34617	93	ATL8C45608:354..43	0.44	g3176660	34	1057	1.9e-85	(AC004393) Similar to ERECTA receptor protein

												kinase gb|U47029 from A. thaliana. [Arabidopsis thaliana]
154541	ATU016481	ATL8C28310:1..988	gap2	ATCEA4S33799	93	ATL8C28310:178..982	0.42	g3036816	34	741	3.3e-74	(AL022373) myosin-like protein [Arabidopsis thaliana]
154542	ATU016482	ATL8C49382:1197..1	gap2	ATCEA4C23444_1	93	ATL8C49382:585..199	0.41	g2827530	34	998	1.4e-101	(AL021633) predicted protein [Arabidopsis thaliana]
154543	ATU016483	ATL8C1817:1..788	gap2	ATCEA4S126	93			g4689452	34	73	0.57	(AC006267) putative transposon protein [Arabidopsis thaliana]
154544	ATU016484	ATL8C20036:6	gap2	ATCEA4S36324	93, 93, 87			g2341035	34	1006		(AC000104)

		26..1		, ATCEA4 C41_1, ATCEA4 S19142								Match to Arabidopsis photolysase (PHH1) gene (gb|X99061) and cryptochrome 2 apoprotein (CRY2) (gb|U43397). ESTs gb|W43661 and gb|Z25638 come from this gene. [Arabidopsis thaliana]
154545	ATU016485	ATL8C39599:1..785	gap2	ATCEA4 S26845	93			g4154352	34	126	5.6e-10	(AF110333) PrMC3 [Pinus radiata]
154546	ATU016486	ATL8C44435:1..346	gap2	ATCEA4 C116992_1	93			g2245040	34	356	1.3e-30	(Z97342) hypothetical protein

												[Arabidopsis thaliana]
154547	ATU016487	ATL8S29699:484..73	gap2	ATCEA4C9854_1	93			g3096922	34	426	2.0e-42	(AL023094) putative protein [Arabidopsis thaliana]
154548	ATU016488	ATL8S1736:497..1	gap2	ATCEA4C10243_1	93	ATL8S1736:497..200	0.70	g4895190	33	265	1.1e-12	(AC007661) unknown protein [Arabidopsis thaliana]
154549	ATU016489	ATL8C14603:88..715	gap2	ATCEA4S4115	93	ATL8C14603:200..715	0.67	g2829918	33	432	7.9e-42	(AC002291) similar to
154550	ATU016490	ATL8S8732:1..478	gap2	ATCEA4C28908_1, ATCEA4S19491	93, 87	ATL8S8732:232..341	0.48	g2262151	33	322	1.6e-12	(AC002330) predicted protein of unknown function [Arabidopsis thaliana]
154551	ATU016491	ATL8C42420:1	gap2	ATCEA4C1714	93	ATL8C42420:1	0.98	g2245030	32	1168	7.4e-100	(Z97341)

		443..1		1		248..323						apetala2 domain TINY homolog [Arabidopsis thaliana]
154552	ATU016492	ATL8C43840:1..1536	gap2	ATCEA4S4388	93	ATL8C43840:1..632, ATL8C43840:1160..912	0.96, 0.63	g4539314	32	498		(AL035679) kinesin like protein [Arabidopsis thaliana]
154553	ATU016493	ATL8S15780:575..1	gap2	ATCEA4C21716_1, ATCEA4S13195, ATCEA4C942_1	93, 90, 83	ATL8S15780:473..194	0.95	g1168529	32	215	2.0e-24	SERINE/THREONINE-PROTEIN KINASE ASK1 [Arabidopsis thaliana]
154554	ATU016494	ATL8C398:2522..1253	gap2	ATCEA4C101020_1	93	ATL8C398:2448..1505	0.91	g4455171	32	1196	5.2e-120	(AL035521) hypothetical protein [Arabidopsis thaliana]
154555	ATU016495	ATL8C42531:1268..14	gap2	ATCEA4S25823, ATCEA4	93, 83	ATL8C42531:1222..226	0.80	g2443751	32	445	1.4e-26	(AF020303) fumarase

				S17006								[Arabidopsis thaliana]
154556	ATU016496	ATL8S2829:526..1	gap2	ATCEA4S32907, ATCEA4S31371	93, 91	ATL8S2829:526..446	0.78	g3510468	32	89	5.5e-08	(AF022081) small nuclear RING finger protein [Rattus norvegicus]
154557	ATU016497	ATL8C15849:114..586	gap2	ATCEA4C73195_1	93	ATL8C15849:114..437	0.54	g2982301	32	187	2.8e-14	(AF051235) YGL010w-like protein [Picea mariana]
154558	ATU016498	ATL8C44195:2270..1	gap2	ATCEA4C14380_1	93	ATL8C44195:2157..78	0.52	g4234854	32	577	2.5e-73	(AF082134) pol polyprotein [Zea mays]
154559	ATU016499	ATL8C30899:428..1	gap2	ATCEA4C1800_1	93			g3386546	32	639	1.6e-51	(AF079503) H-protein promoter binding factor-2a [Arabidopsis

												thaliana]
154560	ATU016500	ATL8C34119:677..1	gap2	ATCEA4C671_1, ATCEA4S33650	93, 86			g3775989	32	491	1.7e-27	(AJ010458) RNA helicase [Arabidopsis thaliana]
154561	ATU016501	ATL8C15928:514..1	gap2	ATCEA4C34299_1	93			g4539422	32	372	1.4e-39	(AL049171) putative protein [Arabidopsis thaliana]
154562	ATU016502	ATL8C48960:703..1	gap2	ATCEA4C9308_1	93	ATL8C48960:698..202	0.93	g3337356	31	579	3.6e-47	(AC004481) putative protein transport protein SEC61 alpha subunit [Arabidopsis thaliana]
154563	ATU016503	ATL8C36457:1347..219	gap2	ATCEA4C33488_1	93	ATL8C36457:1196..219	0.88	g2443329	31	1119	4.2e-107	(D86122) Mei2-like protein

												[Arabidopsis thaliana]
154564	ATU016504	ATL8C46287:1..788	gap2	ATCEA4S30747	93	ATL8C46287:194..666	0.88	g2961357	31	837	1.8e-84	(AL022140) putative protein [Arabidopsis thaliana]
154565	ATU016505	ATL8S7191:1..527	gap2	ATCEA4S35949, ATCEA4C22848_1	93, 82			g3941462	31	250	4.2e-20	(AF062885) putative transcription factor [Arabidopsis thaliana]
154566	ATU016506	ATL8C42258:791..1159	gap2	ATCEA4C814_2, ATCEA4S31212, ATCEA4S5565	93, 90, 85			g1169598	31	563	1.6e-49	OMEGA-6 FATTY ACID DESATURASE, ENDOPLASMIC RETICULUM (DELTA-12 DESATURASE) [Arabidopsis thaliana]
154567	ATU016	ATL8C2	gap2	ATCEA4	93			g44907	31	293	9.8e-	(AL035

	507	6452:1..714		C105611_1				41			20	708) hypothetical protein [Arabidopsis thaliana]
154568	ATU016508	ATL8C43184:1..659	gap2	ATCEA4S30097	93			g2134991	31	70	0.017	deoxycytidylate deaminase - human [Homo sapiens]
154569	ATU016509	ATL8C10178:1519..3059	gap2	ATCEA4S32645	93			g4587599	31	168		(AC006951) hypothetical protein [Arabidopsis thaliana]
154570	ATU016510	ATL8C48019:2078..1020	gap2	ATCEA4S32525, ATCEA4S16339	93, 83	ATL8C48019:1913..1509	0.99	g4753658	30	128	2.1e-08	(AL049751) putative protein [Arabidopsis thaliana]
154571	ATU016511	ATL8C30868:993..198	gap2	ATCEA4S14831	93	ATL8C30868:849..568	0.89	g2911073	30	482	1.9e-42	(AL021960) putative protein [Arabi

												dopsis thaliana]
154572	ATU016512	ATL8C3115:536..1	gap2	ATCEA4C142447_1	93	ATL8C3115:480..50	0.89	g3249105	30	178	5.5e-16	(AC003114) Contains similarity to protein phosphatase 2C (ABI1) gb|X78886 from A. thaliana. [Arabidopsis thaliana]
154573	ATU016513	ATL8C13552:1296..657	gap2	ATCEA4S7260	93	ATL8C13552:1182..657	0.83	g4038352	30	378	4.2e-38	(AF098951) breast cancer resistance protein [Homo sapiens]
154574	ATU016514	ATL8S1523:1..544	gap2	ATCEA4S36368, ATCEA4C1850_1	93, 93	ATL8S1523:103..303	0.75	g3820620	30	190	3.5e-14	(AF099970) putative formamidopyrimidine-DNA

												glycosylase 1 [Arabidopsis thaliana]
154575	ATU016515	ATL8C9932:1..928	gap2	ATCEA4S11712, ATCEA4C44776_1	93, 86	ATL8C9932:445..837	0.72	g2842477	30	325	3.9e-11	(AL021749) copper-binding protein-like [Arabidopsis thaliana]
154576	ATU016516	ATL8C46723:1031..1	gap2	ATCEA4C30196_1	93	ATL8C46723:936..117	0.72	g4455192	30	581	5.7e-51	(AL035440) putative protein [Arabidopsis thaliana]
154577	ATU016517	ATL8C20331:388..968	gap2	ATCEA4S31349	93	ATL8C20331:447..962	0.54	g3873913	30	166	5.4e-05	(Z71258) similar to Flavin-binding monooxygenase-like [Caenorhabditis elegans]

154578	ATU016518	ATL8C7179:544..1	gap2	ATCEA4C2952_1, ATCEA4C2952_2	93, 91	ATL8C7179:417..17	0.42	g4510397	30	710	1.2e-59	(AC006587) putative prepro MP27-MP32 [Arabidopsis thaliana]
154579	ATU016519	ATL8C3603:1302..497	gap2	ATCEA4S29310	93			g4176420	30	358	7.3e-34	(AB008097) cytochrome P450 [Arabidopsis thaliana]
154580	ATU016520	ATL8C17820:4365..3228	gap2	ATCEA4S3310	93			g3482933	30	1314		(AC003970) Similar to cdc2 protein kinases [Arabidopsis thaliana]
154581	ATU016521	ATL8C44038:887..43	gap2	ATCEA4S770	93	ATL8C44038:760..176	1.00					
154582	ATU016522	ATL8C33080:512..1	gap2	ATCEA4C984_1	93	ATL8C33080:475..409	1.00					
154583	ATU016523	ATL8C31433:215..93	gap2	ATCEA4C13949_1	93	ATL8C31433:215..57	1.00					

		2				9						
154584	ATU0161524	ATL8C48658:2235..1929	gap2	ATCEA4S33466	93	ATL8C48658:2235..1929	1.00					
154585	ATU0161525	ATL8C4303:1045..227	gap2	ATCEA4S34790, ATCEA4S10857	93, 85	ATL8C4303:700..328	1.00					
154586	ATU0161526	ATL8S13305:1..508	gap2	ATCEA4C2666_2, ATCEA4S31310, ATCEA4S31124, ATCEA4C2666_1	93, 92, 85, 82	ATL8S13305:220..332	1.00					
154587	ATU0161527	ATL8C32254:4697..2492	gap2	ATCEA4C31969_1	93	ATL8C32254:4652..2492	0.99					
154588	ATU0161528	ATL8C32301:767..21	gap2	ATCEA4S2084	93	ATL8C32301:716..21	0.99					
154589	ATU0161529	ATL8C41306:270..860	gap2	ATCEA4C9797_1, ATCEA4S17614	93, 92	ATL8C41306:636..860	0.99					
154590	ATU0161530	ATL8S26235:1..337	gap2	ATCEA4S126	93	ATL8S26235:244..337	0.99					
154591	ATU0161531	ATL8C40498:674..1438	gap2	ATCEA4C46829_2, ATCEA4C46829_1	93, 92	ATL8C40498:922..1288	0.99					

154592	ATU0161532	ATL8C28894:1..573	gap2	ATCEA4S10420	93	ATL8C28894:298..573	0.99					
154593	ATU0161533	ATL8C41104:286..36	gap2	ATCEA4S932	93	ATL8C41104:258..205	0.99					
154594	ATU0161534	ATL8C49454:1191..1558	gap2	ATCEA4C24006_4	93	ATL8C49454:1232..1532	0.99					
154595	ATU0161535	ATL8C42200:1424..273	gap2	ATCEA4C53622_1	93	ATL8C42200:1424..530	0.98					
154596	ATU0161536	ATL8C32093:756..1077	gap2	ATCEA4S1729, ATCEA4C11062_1, ATCEA4S1718	93, 93, 88	ATL8C32093:973..1059	0.98					
154597	ATU0161537	ATL8C18001:3106..795	gap2	ATCEA4C117938_1, ATCEA4C117886_1	93, 91	ATL8C18001:3106..938	0.98					
154598	ATU0161538	ATL8C25838:1..1388	gap2	ATCEA4C5684_1, ATCEA4S20040, ATCEA4C5684_2	93, 86, 85	ATL8C25838:41..1245	0.98					
154599	ATU0161539	ATL8C37896:435..792	gap2	ATCEA4S11305	93	ATL8C37896:527..760	0.98					
154600	ATU0161540	ATL8S19638:1	gap2	ATCEA4C21901	93, 90	ATL8S19638:1	0.98					

		15..420		_1, ATCEA4S13930		86..420						
154601	ATU016541	ATL8C32964:2291..213	gap2	ATCEA4S6371	93	ATL8C32964:2291..213	0.98					
154602	ATU016542	ATL8C23428:1077..297	gap2	ATCEA4C527_1	93	ATL8C23428:870..318	0.98					
154603	ATU016543	ATL8C29299:46..835	gap2	ATCEA4S35727	93	ATL8C29299:46..635	0.97					
154604	ATU016544	ATL8C2873:613..78	gap2	ATCEA4S35617	93	ATL8C2873:613..78	0.97					
154605	ATU016545	ATL8C23802:497..69	gap2	ATCEA4S2702	93	ATL8C23802:490..69	0.97					
154606	ATU016546	ATL8C28225:116..263	gap2	ATCEA4C31565_1	93	ATL8C28225:116..256	0.97					
154607	ATU016547	ATL8C16186:1157..584	gap2	ATCEA4S33286	93	ATL8C16186:927..715	0.97					
154608	ATU016548	ATL8C49726:574..1738	gap2	ATCEA4S34494, ATCEA4C102718_1	93, 86	ATL8C49726:596..1371	0.97					
154609	ATU016549	ATL8C20199:514..1	gap2	ATCEA4C4553_1, ATCEA4S5555	93, 83	ATL8C20199:514..61	0.97					
154610	ATU016550	ATL8C23639:1..569	gap2	ATCEA4S13346	93	ATL8C23639:281..385	0.97					
154611	ATU016	ATL8C3	gap2	ATCEA4	93	ATL8C3	0.97					

	551	7633:360..988		C43896_1		7633:558..988						
154612	ATU016552	ATL8C21831:218..1041	gap2	ATCEA4C4855_1, ATCEA4S11675	93, 84	ATL8C21831:366..475	0.97					
154613	ATU016553	ATL8C15986:2464..369	gap2	ATCEA4C1831_1, ATCEA4S30506, ATCEA4S10100, ATCEA4S21229	93, 85, 84, 84	ATL8C15986:1861..381	0.96					
154614	ATU016554	ATL8C8018:1..276	gap2	ATCEA4C272_2	93	ATL8C8018:55..170	0.96					
154615	ATU016555	ATL8C6881:579..2079	gap2	ATCEA4S4982	93	ATL8C6881:579..2079	0.96					
154616	ATU016556	ATL8C47050:1530..555	gap2	ATCEA4S5273	93	ATL8C47050:1294..555	0.96					
154617	ATU016557	ATL8S28019:73..454	gap2	ATCEA4C51137_1	93	ATL8S28019:75..454	0.96					
154618	ATU016558	ATL8C9844:1146..475	gap2	ATCEA4S16189, ATCEA4S34490	93, 89	ATL8C9844:997..475	0.95					
154619	ATU016559	ATL8C1630:1265..569	gap2	ATCEA4S26308, ATCEA4S15463	93, 93	ATL8C1630:1123..709	0.95					
154620	ATU016	ATL8C7	gap2	ATCEA4	93	ATL8C7	0.95					

	560	494:21 14..13 36		C29072 _1		494:21 14..13 36						
154621	ATU016 561	ATL8S2 7173:2 49..1	gap2	ATCEA4 C13628 _1	93	ATL8S2 7173:1 39..16	0.95					
154622	ATU016 562	ATL8C4 9020:1 856..1	gap2	ATCEA4 S29537	93	ATL8C4 9020:1 856..2 34	0.95					
154623	ATU016 563	ATL8C3 7283:1 074..1 610	gap2	ATCEA4 C5798_ 1	93	ATL8C3 7283:1 215..1 610	0.95					
154624	ATU016 564	ATL8C4 4169:5 45..67	gap2	ATCEA4 S33595 , ATCEA4 C18999 _1	93, 85	ATL8C4 4169:3 58..18 2	0.95					
154625	ATU016 565	ATL8C1 5979:2 5..520	gap2	ATCEA4 C40977 _1	93	ATL8C1 5979:2 5..518	0.95					
154626	ATU016 566	ATL8C2 1911:1 99..77 4	gap2	ATCEA4 S32535	93	ATL8C2 1911:1 99..68 3	0.95					
154627	ATU016 567	ATL8C4 2443:1 ..907	gap2	ATCEA4 S5997	93	ATL8C4 2443:5 ..907	0.95					
154628	ATU016 568	ATL8C4 9895:3 99..19	gap2	ATCEA4 C61032 _1, ATCEA4 S29626	93, 83	ATL8C4 9895:3 94..58	0.94					
154629	ATU016 569	ATL8C9 256:17 23..88 2	gap2	ATCEA4 S32175	93	ATL8C9 256:17 12..88 2	0.94					
154630	ATU016 570	ATL8S2 7190:3 64..1	gap2	ATCEA4 C13854 _1	93	ATL8S2 7190:3 28..19 9	0.94					
154631	ATU016	ATL8C1	gap2	ATCEA4	93	ATL8C1	0.94					

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	571	3161:2975..3455		C27241_1		3161:3203..2994						
154632	ATU016572	ATL8S26102:94..569	gap2	ATCEA4C32981_1	93	ATL8S26102:94..517	0.94					
154633	ATU016573	ATL8C26557:1..1713	gap2	ATCEA4C8256_1, ATCEA4S36103, ATCEA4C134095_1, ATCEA4S780	93, 91, 90, 83	ATL8C26557:188..1564	0.94					
154634	ATU016574	ATL8C28141:117..778	gap2	ATCEA4S11431	93	ATL8C28141:117..667	0.94					
154635	ATU016575	ATL8C21742:1..531	gap2	ATCEA4C33874_1	93	ATL8C21742:124..531	0.94					
154636	ATU016576	ATL8C3691:2972..261	gap2	ATCEA4C131702_1, ATCEA4C56374_1, ATCEA4S32856	92, 90, 87	ATL8C3691:2825..960	0.93	g3776011, g3776031	100, 100	882, 164	2.7e-87, 3.1e-13	(AJ010469) RNA helicase [Arabidopsis thaliana]; (AJ010477) RNA helicase [Arabidopsis thaliana]
154637	ATU016	ATL8C4	gap2	ATCEA4	92	ATL8C4	0.93,	g22451	100	1151	1.4e-	(Z9734

	577	209:3693..626		C115981_1		209:1622..788, ATL8C4 209:3693..2140	0.92	00			78	3) DNA-binding protein homolog [Arabidopsis thaliana]
154638	ATU016578	ATL8C7 460:593..129	gap2	ATCEA4C117236_1	93	ATL8C7 460:540..344	0.93					
154639	ATU016579	ATL8C4 4085:1009..345	gap2	ATCEA4S6711, ATCEA4C53493_1	93, 93	ATL8C4 4085:884..522	0.93					
154640	ATU016580	ATL8S2 3682:1..440	gap2	ATCEA4C73732_2, ATCEA4S32924	93, 89	ATL8S2 3682:174..316	0.92					
154641	ATU016581	ATL8C3 9106:1..808	gap2	ATCEA4C1806_1	93	ATL8C3 9106:142..525	0.92					
154642	ATU016582	ATL8C3 3845:2568..117	gap2	ATCEA4S11546, ATCEA4S34548	93, 92	ATL8C3 3845:2568..117	0.92					
154643	ATU016583	ATL8C2 9196:81..627	gap2	ATCEA4C9701_1	93	ATL8C2 9196:257..424	0.92					
154644	ATU016584	ATL8C3 404:51..2923	gap2	ATCEA4S568	93	ATL8C3 404:51..2781	0.92					
154645	ATU016585	ATL8C2 0744:329..17	gap2	ATCEA4C5390_1,	93, 92	ATL8C2 0744:329..16	0.92					

		46		ATCEA4S3160		30						
154646	ATU0165 86	ATL8C45762:2518..183	gap2	ATCEA4C18335_1, ATCEA4C18335_2	93, 89	ATL8C45762:1990..183	0.92					
154647	ATU0165 87	ATL8C27698:7708..1314	gap2	ATCEA4C13576_1	93	ATL8C27698:7771..927	0.92					
154648	ATU0165 88	ATL8C47931:375..862	gap2	ATCEA4C8213_1	93	ATL8C47931:539..784	0.91					
154649	ATU0165 89	ATL8C48533:4911..2945	gap2	ATCEA4S12248, ATCEA4S31332, ATCEA4S3563	93, 92, 89	ATL8C48533:4744..2945	0.91					
154650	ATU0165 90	ATL8C40142:1767..45	gap2	ATCEA4C27495_1	93	ATL8C40142:1548..45	0.91					
154651	ATU0165 91	ATL8C12603:667..1	gap2	ATCEA4C91651_1	93	ATL8C12603:667..44	0.91					
154652	ATU0165 92	ATL8S30908:80..235	gap2	ATCEA4C2131_1	93	ATL8S30908:92..235	0.91					
154653	ATU0165 93	ATL8C992:1245..20	gap2	ATCEA4S4852	93	ATL8C992:1007..20	0.91					
154654	ATU0165 94	ATL8C48991:1231..9	gap2	ATCEA4C53444_1	93	ATL8C48991:1167..9	0.91					
154655	ATU0165 95	ATL8C38507:651..1	gap2	ATCEA4S33613, ATCEA4	93, 85	ATL8C38507:339..190	0.91					

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154656	ATU016596	ATL8S13349:261..1	gap2	ATCEA4C2915_1	93	ATL8S13349:220..11	0.91					
154657	ATU016597	ATL8C22881:373..1363	gap2	ATCEA4S7742, ATCEA4S35673, ATCEA4S2442, ATCEA4S9794, ATCEA4S11780, ATCEA4S10284, ATCEA4S29265, ATCEA4S24444	93, 89, 86, 84, 83, 82, 82, 82	ATL8C22881:407..1213	0.90					
154658	ATU016598	ATL8C40954:178..407	gap2	ATCEA4C24450_1	93	ATL8C40954:226..405	0.90					
154659	ATU016599	ATL8C9333:1213..115	gap2	ATCEA4C5959_1	93	ATL8C9333:1154..115	0.90					
154660	ATU016600	ATL8C49749:3080..2156	gap2	ATCEA4S33700, ATCEA4C102736_1	92, 82	ATL8C49749:3047..2177	0.90	g1711355	100	663	1.4e-60	SHORT-CHAIN TYPE DEHYDROGENASE/REDUCTASE [Picea abies]
154661	ATU016601	ATL8C5890:249..301	gap2	ATCEA4S11815	93	ATL8C5890:249..301	0.90					

		2				2						
154662	ATU0160602	ATL8C2240:645..1070	gap2	ATCEA4S27399	93	ATL8C2240:645..800	0.89					
154663	ATU0160603	ATL8C48504:1240..41	gap2	ATCEA4C123213_1, ATCEA4C123212_1	93, 91	ATL8C48504:1056..163	0.89					
154664	ATU0160604	ATL8C30170:1196..2782	gap2	ATCEA4C21347_1	93	ATL8C30170:1196..2782	0.89					
154665	ATU0160605	ATL8C30663:166..9131	gap2	ATCEA4S34900	92	ATL8C30663:166..9126	0.89	g3513726	100	409	1.5e-40	(AF080118) F8M12.23 gene product [Arabidopsis thaliana]
154666	ATU0160606	ATL8C29545:684..1	gap2	ATCEA4C760_1, ATCEA4C760_3	93, 86	ATL8C29545:366..54	0.89					
154667	ATU0160607	ATL8C12545:2518..251	gap2	ATCEA4C61532_1, ATCEA4C122810_1	92, 91	ATL8C12545:2478..251	0.88	g3892714	100	1608	1.7e-144	(AL033545) trehalose-6-phosphate phosphatase-like protein [Arabidopsis

												thaliana]
154668	ATU016608	ATL8C23175:1683..4394	gap2	ATCEA4S36187, ATCEA4C55696_2, ATCEA4S34859, ATCEA4C55696_5, ATCEA4C55696_1	93, 93, 92, 84, 82	ATL8C23175:1964..4264	0.88					
154669	ATU016609	ATL8C15077:303..2433	gap2	ATCEA4S178, ATCEA4S253	92, 87	ATL8C15077:399..2433	0.88	g4038066, g4567295	100, 35	602, 619	1.8e-31, 9.1e-62	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AC006918) putative polpolyprotein [Arabidopsis thaliana]
154670	ATU016610	ATL8C17223:640..2708	gap2	ATCEA4S2714	92	ATL8C17223:640..2708	0.88	g2191142	100	2980	6.5e-311	(AF007269) A_IG002N01.27 gene product [Arabi

												dopsis thaliana]
154671	ATU0161611	ATL8C17277:488..1454	gap2	ATCEA4C69841_1	93	ATL8C17277:560..1264	0.88					
154672	ATU0161612	ATL8S17570:1..521	gap2	ATCEA4C33771_1	93	ATL8S17570:66..521	0.88					
154673	ATU0161613	ATL8C4355:1200..34	gap2	ATCEA4S18767	93	ATL8C4355:1200..35	0.88					
154674	ATU0161614	ATL8C7630:2560..1823	gap2	ATCEA4C157758_1	93	ATL8C7630:2560..2295	0.87					
154675	ATU0161615	ATL8C10356:1..349	gap2	ATCEA4S3865	93	ATL8C10356:120..215	0.87					
154676	ATU0161616	ATL8S26069:78..457	gap2	ATCEA4S34092, ATCEA4C133432	93, 92	ATL8S26069:78..189	0.87					
154677	ATU0161617	ATL8C23865:1..1863	gap2	ATCEA4S30765, ATCEA4S31351, ATCEA4S35111, ATCEA4S35133, ATCEA4S28251	93, 93, 93, 91, 86	ATL8C23865:175..1664	0.87					
154678	ATU0161618	ATL8C32882:766..14	gap2	ATCEA4C8674_1	93	ATL8C32882:1231..1	0.86					

		25				395						
154679	ATU0161619	ATL8C48667:1724..1	gap2	ATCEA4C13227_1	93	ATL8C48667:1293..88	0.86					
154680	ATU0161620	ATL8C34092:1650..1	gap2	ATCEA4S3081	93	ATL8C34092:1650..120	0.86					
154681	ATU0161621	ATL8C10729:852..31	gap2	ATCEA4S10480	93	ATL8C10729:852..77	0.86					
154682	ATU0161622	ATL8C24142:378..1661	gap2	ATCEA4C38699_1	92	ATL8C24142:477..1661	0.86	g3540190	100	237	2.4e-15	(AC004122) Hypothetical protein [Arabidopsis thaliana]
154683	ATU0161623	ATL8C26195:2865..288	gap2	ATCEA4S11999	93	ATL8C26195:2540..288	0.86					
154684	ATU0161624	ATL8C229:2833..73	gap2	ATCEA4C91731_1	93	ATL8C229:2833..73	0.85					
154685	ATU0161625	ATL8C27124:603..905	gap2	ATCEA4S31616	93	ATL8C27124:603..754	0.85					
154686	ATU0161626	ATL8C38310:1784..1114	gap2	ATCEA4C101997_1	93	ATL8C38310:1784..1271	0.85					
154687	ATU0161627	ATL8C47790:1876..464	gap2	ATCEA4C18903_1	93	ATL8C47790:1524..464	0.85					
154688	ATU0161628	ATL8C15438:744..17	gap2	ATCEA4C7766_1	93	ATL8C15438:905..15	0.85					

		73				53						
154689	ATU0166629	ATL8C2328:421..1	gap2	ATCEA4C119443_1	93	ATL8C2328:421..149	0.85					
154690	ATU0166630	ATL8C38415:1249..1	gap2	ATCEA4C2174_1	93	ATL8C38415:1186..523	0.85					
154691	ATU0166631	ATL8C30791:499..1689	gap2	ATCEA4C20463_1	93	ATL8C30791:1689..499	0.85					
154692	ATU0166632	ATL8C329:87..1316	gap2	ATCEA4C119092_1, ATCEA4C68950_1	93, 93	ATL8C329:144..1195	0.85					
154693	ATU0166633	ATL8C24706:203..1015	gap2	ATCEA4S13044	93	ATL8C24706:222..1015	0.85					
154694	ATU0166634	ATL8C31548:724..23	gap2	ATCEA4C65985_1	93	ATL8C31548:724..23	0.84					
154695	ATU0166635	ATL8C41238:496..572	gap2	ATCEA4S1227	93	ATL8C41238:498..564	0.84					
154696	ATU0166636	ATL8C48660:1137..131	gap2	ATCEA4C2705_1	93	ATL8C48660:1137..471	0.84					
154697	ATU0166637	ATL8C37004:2663..1	gap2	ATCEA4S28837	93	ATL8C37004:2663..36	0.84					
154698	ATU0166638	ATL8C12664:2668..692	gap2	ATCEA4S1551	93	ATL8C12664:2304..692	0.84					
154699	ATU0166639	ATL8C22228:1983..1	gap2	ATCEA4C25358_1	93	ATL8C22228:1689..1	0.84					

		233				233						
154700	ATU0164640	ATL8C15540:1313..36	gap2	ATCEA4S5397	93	ATL8C15540:1313..313	0.84					
154701	ATU0164641	ATL8C11075:1..671	gap2	ATCEA4C122611_1	93	ATL8C11075:50..671	0.84					
154702	ATU0164642	ATL8C9580:2057..382	gap2	ATCEA4S32870,ATCEA4S11860	93, 91	ATL8C9580:2057..431	0.83					
154703	ATU0164643	ATL8C22905:3139..2477	gap2	ATCEA4C43837_1	93	ATL8C22905:3031..2588	0.83					
154704	ATU0164644	ATL8C22941:1180..206	gap2	ATCEA4S7742,ATCEA4S35673,ATCEA4S2442,ATCEA4S9794,ATCEA4S11780,ATCEA4S10284,ATCEA4S28209,ATCEA4S29265	93,90,86,85,83,82,82, 82	ATL8C22941:1143..338	0.83					
154705	ATU0164645	ATL8C45970:2940..1436	gap2	ATCEA4C18737_1	93	ATL8C45970:2802..1436	0.82					
154706	ATU0164646	ATL8C48284:1120..1	gap2	ATCEA4C29587_1	93	ATL8C48284:1120..1	0.82					

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154707	ATU016647	ATL8C12536:1114..61	gap2	ATCEA4S5471, ATCEA4C5561_1, ATCEA4S31784	93, 92, 83	ATL8C12536:793..61	0.82					
154708	ATU016648	ATL8C44862:1..1390	gap2	ATCEA4C2115_1	93	ATL8C44862:196..1305	0.82					
154709	ATU016649	ATL8C32949:110..575	gap2	ATCEA4S35919	93	ATL8C32949:436..575	0.82					
154710	ATU016650	ATL8C19237:649..45	gap2	ATCEA4C47605_2	93	ATL8C19237:619..119	0.82					
154711	ATU016651	ATL8C45170:772..2500	gap2	ATCEA4S28614, ATCEA4S35800	92, 90	ATL8C45170:1045..2500	0.82	g4589964	100	854	2.6e-68	(AC007169) delta 9 desaturase [Arabidopsis thaliana]
154712	ATU016652	ATL8C4115:2409..51	gap2	ATCEA4S7191	93	ATL8C4115:2409..415	0.82					
154713	ATU016653	ATL8S5829:586..1	gap2	ATCEA4C9797_1, ATCEA4S17614	93, 88	ATL8S5829:312..47	0.81					
154714	ATU016654	ATL8C18711:1062..385	gap2	ATCEA4C69477_1	93	ATL8C18711:1055..647	0.81					
154715	ATU016	ATL8C1	gap2	ATCEA4	93	ATL8C1	0.81					

	655	8663:1..652		C688_1		8663:56..237						
154716	ATU0166656	ATL8C6234:568..171	gap2	ATCEA4S6646	93	ATL8C6234:559..171	0.81					
154717	ATU0166657	ATL8C20607:523..1	gap2	ATCEA4C5534_2, ATCEA4C537612	93, 89	ATL8C20607:485..18	0.81					
154718	ATU0166658	ATL8C18873:3078..930	gap2	ATCEA4C7399_1, ATCEA4S30452, ATCEA4S31672	93, 85, 83	ATL8C18873:3006..930	0.81					
154719	ATU0166659	ATL8C2335:727..1	gap2	ATCEA4S32216, ATCEA4C30815_1	93, 89	ATL8C2335:129..24	0.81					
154720	ATU0166660	ATL8C35158:163..1188	gap2	ATCEA4S2861	93	ATL8C35158:163..1188	0.81					
154721	ATU0166661	ATL8C19562:1890..1	gap2	ATCEA4C115761_1, ATCEA4C137938_1	93, 88	ATL8C19562:1724..423	0.80					
154722	ATU0166662	ATL8C22006:950..21	gap2	ATCEA4S32530	93	ATL8C22006:950..21	0.80					
154723	ATU0166663	ATL8C9458:334..816	gap2	ATCEA4S4984	93	ATL8C9458:816..334	0.80					
154724	ATU0166664	ATL8C46477:1400..1	gap2	ATCEA4S2676	93	ATL8C46477:978..12	0.80					

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154725	ATU0166 65	ATL8C37296:1106..304	gap2	ATCEA4S7282	93	ATL8C37296:1106..304	0.80					
154726	ATU0166 66	ATL8S17727:1..503	gap2	ATCEA4C833_2	93	ATL8S17727:228..407	0.80					
154727	ATU0166 67	ATL8C31317:677..89	gap2	ATCEA4S2238	93	ATL8C31317:516..89	0.80					
154728	ATU0166 68	ATL8C47223:1025..208	gap2	ATCEA4S35037	93	ATL8C47223:1025..448	0.80					
154729	ATU0166 69	ATL8C25519:1577..175	gap2	ATCEA4C30032_1	93	ATL8C25519:1457..175	0.80					
154730	ATU0166 70	ATL8C12491:242..567	gap2	ATCEA4S6262	93	ATL8C12491:260..567	0.80					
154731	ATU0166 71	ATL8C20532:1..831	gap2	ATCEA4C19136_1	93	ATL8C20532:13..831	0.79					
154732	ATU0166 72	ATL8C36051:1102..1	gap2	ATCEA4C26554_1	93	ATL8C36051:1102..45	0.79					
154733	ATU0166 73	ATL8C26082:722..3039	gap2	ATCEA4S3346, ATCEA4S13817, ATCEA4C1235_3	92, 90, 87	ATL8C26082:837..3009	0.79	g3080392	100	2344	3.4e-198	(AL022603) glucose transporter [Arabidopsis thaliana]
154734	ATU0166 74	ATL8C40395:715..28	gap2	ATCEA4S7640	93	ATL8C40395:701..28	0.79					

154735	ATU0166675	ATL8C18:369..116	gap2	ATCEA4C8643_1	93	ATL8C18:369..130	0.79					
154736	ATU0166676	ATL8C30769:2139..1067	gap2	ATCEA4S36283	93	ATL8C30769:2077..1067	0.79					
154737	ATU0166677	ATL8C40617:92..646	gap2	ATCEA4S11254	93	ATL8C40617:140..616	0.79					
154738	ATU0166678	ATL8C8803:541..1	gap2	ATCEA4S36364	93	ATL8C8803:536..20	0.79					
154739	ATU0166679	ATL8C37569:2976..20	gap2	ATCEA4S33124, ATCEA4S35864	93, 93	ATL8C37569:2966..447	0.78					
154740	ATU0166680	ATL8C23534:1399..1	gap2	ATCEA4C30522_2, ATCEA4C87130_1	93, 91	ATL8C23534:1190..132	0.78					
154741	ATU0166681	ATL8S7468:351..19	gap2	ATCEA4S12135	93	ATL8S7468:212..19	0.78					
154742	ATU0166682	ATL8C35525:14..1259	gap2	ATCEA4S29547	93	ATL8C35525:56..1259	0.78					
154743	ATU0166683	ATL8C37682:11723..701	gap2	ATCEA4S2343	93	ATL8C37682:11549..701	0.78					
154744	ATU0166684	ATL8C26166:11924..1006	gap2	ATCEA4S6081	93	ATL8C26166:11706..1006	0.78					
154745	ATU0166685	ATL8C17677:11174..1	gap2	ATCEA4S34336	93	ATL8C17677:11174..132	0.77					

154746	ATU0168686	ATL8C37622:833..1361	gap2	ATCEA4C8296_1, ATCEA4S36140	93, 83	ATL8C37622:945..1334	0.77					
154747	ATU0168687	ATL8C17636:440..1	gap2	ATCEA4C47067_1	93	ATL8C17636:438..201	0.77					
154748	ATU0168688	ATL8C18342:934..1149	gap2	ATCEA4S32128	93	ATL8C18342:965..1096	0.77					
154749	ATU0168689	ATL8C24850:3277..824	gap2	ATCEA4C16121_2	92	ATL8C24850:3173..824	0.77	g3269287	100	1256	1.5e-139	(AL030978) GH3 like protein [Arabidopsis thaliana]
154750	ATU0168690	ATL8C42072:1..1442	gap2	ATCEA4S2637, ATCEA4C4692_2, ATCEA4S23889, ATCEA4C4692_1	93, 93, 87, 84	ATL8C42072:254..1442	0.76					
154751	ATU0168691	ATL8C21768:1987..3904	gap2	ATCEA4S32414, ATCEA4S35531	93, 90	ATL8C21768:1987..3829	0.76					
154752	ATU0168692	ATL8S24690:1..449	gap2	ATCEA4S981	93	ATL8S24690:164..449	0.76					
154753	ATU016	ATL8C1	gap2	ATCEA4	93	ATL8C1	0.76					

	693	2374:485..1766		S3503		2374:788..1766						
154754	ATU016694	ATL8C49603:823..37	gap2	ATCEA4S31491	93	ATL8C49603:823..37	0.76					
154755	ATU016695	ATL8S8334:703..135	gap2	ATCEA4C3622_1	93	ATL8S8334:370..135	0.76					
154756	ATU016696	ATL8C25761:1..3050	gap2	ATCEA4S12288	93	ATL8C25761:45..3050	0.76					
154757	ATU016697	ATL8S9307:520..76	gap2	ATCEA4C905_1	93	ATL8S9307:397..340	0.76					
154758	ATU016698	ATL8C27608:1632..158	gap2	ATCEA4S2677	93	ATL8C27608:1577..158	0.75					
154759	ATU016699	ATL8C6625:1102..120	gap2	ATCEA4C29241_1	93	ATL8C6625:1037..120	0.75					
154760	ATU016700	ATL8C17831:3274..153	gap2	ATCEA4C17212_1	93	ATL8C17831:3221..153	0.75					
154761	ATU016701	ATL8C13085:1824..2849	gap2	ATCEA4S36266	92	ATL8C13085:1824..2664	0.75	g12127759	100	1196	2.6e-90	(X89192) DNA binding protein [Arabidopsis thaliana]
154762	ATU016702	ATL8C21515:18..567	gap2	ATCEA4C43302_1	93	ATL8C21515:18..526	0.75					
154763	ATU016703	ATL8C6228:252..114	gap2	ATCEA4C16891_1,	93, 91	ATL8C6228:297..114	0.75					

		5		ATCEA4S1824		5						
154764	ATU016704	ATL8C23200:530..1	gap2	ATCEA4C32863_1	93	ATL8C23200:530..37	0.75					
154765	ATU016705	ATL8C46573:1181..59	gap2	ATCEA4C4445_1	93	ATL8C46573:739..59	0.75					
154766	ATU016706	ATL8S18230:635..58	gap2	ATCEA4C1726_2, ATCEA4C1726_1	93, 93	ATL8S18230:370..67	0.75					
154767	ATU016707	ATL8C9704:114..2139	gap2	ATCEA4S34350	93	ATL8C9704:114..2139	0.74					
154768	ATU016708	ATL8C26743:757..186	gap2	ATCEA4C45771_1	93	ATL8C26743:757..222	0.74					
154769	ATU016709	ATL8S6523:438..60	gap2	ATCEA4S30550	93	ATL8S6523:438..60	0.74					
154770	ATU016710	ATL8C12679:7..769	gap2	ATCEA4S33534	93	ATL8C12679:7..546	0.74					
154771	ATU016711	ATL8C43522:1..973	gap2	ATCEA4C4858_1, ATCEA4S29284	93, 82	ATL8C43522:186..816	0.74					
154772	ATU016712	ATL8C41648:302..857	gap2	ATCEA4S33328	93	ATL8C41648:411..708	0.73					
154773	ATU016713	ATL8S21970:539..19	gap2	ATCEA4C22385_1	93	ATL8S21970:442..19	0.73					
154774	ATU016714	ATL8S28240:115..1	gap2	ATCEA4S6069	93	ATL8S28240:96..14	0.73					

154775	ATU016715	ATL8C5510:3071..1422	gap2	ATCEA4S31831	92	ATL8C5510:3036..1422	0.73	g4138265	100	1115	3.1e-112	(AJ006228) Avr9 elicitor response protein [Nicotiana tabacum]
154776	ATU016716	ATL8C33018:757..1	gap2	ATCEA4S34420	93	ATL8C33018:757..344	0.72					
154777	ATU016717	ATL8C13814:1108..31	gap2	ATCEA4S10316	93	ATL8C13814:1108..31	0.72					
154778	ATU016718	ATL8C23927:1..1370	gap2	ATCEA4S3314, ATCEA4C4409_1	93, 84	ATL8C23927:176..1370	0.72					
154779	ATU016719	ATL8C15231:1704..19	gap2	ATCEA4C5978_1	93	ATL8C15231:1529..19	0.72					
154780	ATU016720	ATL8C1653:2230..1285	gap2	ATCEA4S32066	93	ATL8C1653:2230..1285	0.72					
154781	ATU016721	ATL8C30364:976..1	gap2	ATCEA4C81513_1, ATCEA4S36085	93, 92	ATL8C30364:904..231	0.71					
154782	ATU016722	ATL8C28951:1..932	gap2	ATCEA4C118854_1, ATCEA4C11780	93, 91	ATL8C28951:47..830	0.71					

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154783	ATU016723	ATL8C33070:205..657	gap2	ATCEA4C12084_1, ATCEA4S7128	93, 86	ATL8C33070:591..484	0.71					
154784	ATU016724	ATL8C21448:340..965	gap2	ATCEA4S32878	93	ATL8C21448:340..567	0.71					
154785	ATU016725	ATL8C22268:375..2619	gap2	ATCEA4S2292	93	ATL8C22268:425..2619	0.71					
154786	ATU016726	ATL8C30992:149..552	gap2	ATCEA4S12014	93	ATL8C30992:166..552	0.71					
154787	ATU016727	ATL8C35082:3673..2581	gap2	ATCEA4C964_1	93	ATL8C35082:3673..2733	0.71					
154788	ATU016728	ATL8C48398:154..1047	gap2	ATCEA4S6706	93	ATL8C48398:154..1027	0.71					
154789	ATU016729	ATL8C47723:1821..17	gap2	ATCEA4C30067_1	93	ATL8C47723:1821..43	0.71					
154790	ATU016730	ATL8C37538:1..775	gap2	ATCEA4C52386_1	93	ATL8C37538:138..619	0.71					
154791	ATU016731	ATL8C13618:1..684	gap2	ATCEA4S17958, ATCEA4S27835, ATCEA4S27762, ATCEA4	93, 90, 90, 83	ATL8C13618:259..684	0.70					

				S27522								
154792	ATU016732	ATL8C18594:2166..251	gap2	ATCEA4C120380_1	93	ATL8C18594:2166..256	0.70					
154793	ATU016733	ATL8S9874:515..1	gap2	ATCEA4C74349_1	93	ATL8S9874:515..34	0.70					
154794	ATU016734	ATL8C5165:167..1124	gap2	ATCEA4S2205, ATCEA4S6029	93, 91	ATL8C5165:167..903	0.70					
154795	ATU016735	ATL8C7163:7472..1165	gap2	ATCEA4C11539_1	93	ATL8C7163:7472..1165	0.70					
154796	ATU016736	ATL8C11437:96..3107	gap2	ATCEA4C23736_1, ATCEA4S31964, ATCEA4C30822_1	92, 89, 89	ATL8C11437:1708..3107	0.70	g2583128, g3928102	100, 31	1764, 247	3.7e-178, 3.0e-12	(AC002387) hypothetical protein [Arabidopsis thaliana]; (AC005770) putative protein kinase [Arabidopsis thaliana]
154797	ATU016737	ATL8C37280:848..281	gap2	ATCEA4S35910	93	ATL8C37280:672..281	0.70					
154798	ATU016738	ATL8C11397:657..13	gap2	ATCEA4C13273_1	93	ATL8C11397:436..13	0.70					

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154799	ATU0167 39	ATL8C49344:2331..196	gap2	ATCEA4C119298_1, ATCEA4S31237	93, 88	ATL8C49344:2331..1405	0.70					
154800	ATU0167 40	ATL8C16220:957..507	gap2	ATCEA4S30328	93	ATL8C16220:957..693	0.69					
154801	ATU0167 41	ATL8C30879:1629..954	gap2	ATCEA4S31037	93	ATL8C30879:1629..980	0.69					
154802	ATU0167 42	ATL8C10479:111..563	gap2	ATCEA4S10756	93	ATL8C10479:111..452	0.69					
154803	ATU0167 43	ATL8C15753:2471..171	gap2	ATCEA4C66170_1	93	ATL8C15753:2471..171	0.69					
154804	ATU0167 44	ATL8C38360:1..915	gap2	ATCEA4C644_1	93	ATL8C38360:289..882	0.69					
154805	ATU0167 45	ATL8C42892:1..416	gap2	ATCEA4C24485_1	93	ATL8C42892:89..244	0.68					
154806	ATU0167 46	ATL8C7426:731..1	gap2	ATCEA4S490	93	ATL8C7426:731..245	0.68					
154807	ATU0167 47	ATL8C2398:417..1	gap2	ATCEA4C153480_1	93	ATL8C2398:352..233	0.68					
154808	ATU0167 48	ATL8C5777:777..7	gap2	ATCEA4C133218_1	93	ATL8C5777:777..71	0.68					
154809	ATU0167 49	ATL8C28461:266..1	gap2	ATCEA4C8730_1	93	ATL8C28461:208..77	0.68					
154810	ATU0167 50	ATL8C43054:304..44	gap2	ATCEA4S3297	93	ATL8C43054:444..33	0.67					

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154811	ATU0167 51	ATL8C23773:3621..49	gap2	ATCEA4S3621, ATCEA4C15080_5, ATCEA4S14388	92, 91, 85	ATL8C23773:3621..1079	0.67	g3169171	100	1374	4.2e-103	(AC004401) putative serine carboxypeptidase I [Arabidopsis thaliana]
154812	ATU0167 52	ATL8C25176:359..2065	gap2	ATCEA4S30737, ATCEA4S35169	93, 88	ATL8C25176:359..2042	0.67					
154813	ATU0167 53	ATL8C15118:797..1008	gap2	ATCEA4S32362	93	ATL8C15118:797..977	0.67					
154814	ATU0167 54	ATL8C45334:612..86	gap2	ATCEA4C34174_1	93	ATL8C45334:377..248	0.67					
154815	ATU0167 55	ATL8C31073:913..1	gap2	ATCEA4C6646_1	93	ATL8C31073:584..552	0.67					
154816	ATU0167 56	ATL8C14038:2032..762	gap2	ATCEA4S1801	92	ATL8C14038:2032..955	0.67	g4567253	100	1646	1.1e-156	(AC007070) putative serpin protein [Arabidopsis thaliana]
154817	ATU0167 57	ATL8C33357:317..11	gap2	ATCEA4S7652	93	ATL8C33357:317..98	0.67					

		11				2						
154818	ATU0167 58	ATL8C37173:4078..818	gap2	ATCEA4C47540_1	93	ATL8C37173:4078..818	0.67					
154819	ATU0167 59	ATL8S9758:235..581	gap2	ATCEA4C29434_1	93	ATL8S9758:235..325	0.67					
154820	ATU0167 60	ATL8C37117:580..1615	gap2	ATCEA4S3878	93	ATL8C37117:580..1615	0.66					
154821	ATU0167 61	ATL8S22150:477..109	gap2	ATCEA4S34509	93	ATL8S22150:477..285	0.66					
154822	ATU0167 62	ATL8C16882:135..2693	gap2	ATCEA4S34752, ATCEA4S29529, ATCEA4C26741_1	92, 89, 85	ATL8C16882:224..2308	0.66	g3184559	100	389	4.4e-22	(AF052290) putative c-type cytochrome biogenesis protein [Synechococcus PCC7002]
154823	ATU0167 63	ATL8C45959:1..229	gap2	ATCEA4S11518	93	ATL8C45959:56..229	0.66					
154824	ATU0167 64	ATL8C33444:595..6531	gap2	ATCEA4S27399, ATCEA4S344, ATCEA4S178, ATCEA4S253	92, 90, 90, 86	ATL8C33444:595..6505	0.66	g4773908, g4558684, g2522228	100, 99, 66	3940, 527, 952	0.0, 2.5e-23, 7.4e-83	(AF147259) No definition line found [Arabidopsis

												thaliana]; (AC006586) hypothetical protein [Arabidopsis thaliana]; (AB007466) reverse transcriptase-like protein [Vicia faba]
154825	ATU016765	ATL8C25598:1090..1	gap2	ATCEA4C30991_1, ATCEA4C10488_1	93, 88	ATL8C25598:769..468	0.66					
154826	ATU016766	ATL8C44947:777..173	gap2	ATCEA4C7420_1	93	ATL8C44947:683..173	0.66					
154827	ATU016767	ATL8C4532:351..1825	gap2	ATCEA4S31003, ATCEA4S32379	93, 89	ATL8C4532:351..1786	0.66					
154828	ATU016768	ATL8C22286:1836..173	gap2	ATCEA4S31430	92	ATL8C22286:1836..173	0.66	g4417287	100	449	1.9e-52	(AC007019) unknown protein [Arabi

												dopsis thaliana]
154829	ATU0167 69	ATL8C2726:1463..730	gap2	ATCEA4C83936_1	93	ATL8C2726:1400..913	0.65					
154830	ATU0167 70	ATL8C8694:1494..230	gap2	ATCEA4C42944_1	93	ATL8C8694:1494..230	0.65					
154831	ATU0167 71	ATL8C9094:224..2461	gap2	ATCEA4S12366	93	ATL8C9094:224..2461	0.65					
154832	ATU0167 72	ATL8C29125:609..1384	gap2	ATCEA4C16918_1	93	ATL8C29125:650..916	0.65					
154833	ATU0167 73	ATL8S23769:563..1	gap2	ATCEA4S6022	93	ATL8S23769:563..13	0.65					
154834	ATU0167 74	ATL8S15008:240..1	gap2	ATCEA4C1932_1	93	ATL8S15008:240..115	0.65					
154835	ATU0167 75	ATL8C14380:1644..2448	gap2	ATCEA4C47832_1	93	ATL8C14380:1644..2448	0.65					
154836	ATU0167 76	ATL8C11488:1100..358	gap2	ATCEA4C32367_1	93	ATL8C11488:1080..358	0.64					
154837	ATU0167 77	ATL8C35870:664..429	gap2	ATCEA4S10390	93	ATL8C35870:506..429	0.64					
154838	ATU0167 78	ATL8C39725:588..86	gap2	ATCEA4C5319_1	93	ATL8C39725:583..112	0.64					
154839	ATU0167 79	ATL8C24956:1	gap2	ATCEA4C10963	93, 91	ATL8C24956:1	0.63					

		201..88		1_1, ATCEA4S30897		201..435						
154840	ATU016780	ATL8C13605:612..1608	gap2	ATCEA4C114720_1, ATCEA4S34012	93, 91	ATL8C13605:612..1454	0.63					
154841	ATU016781	ATL8C27237:234..488	gap2'	ATCEA4S28089	93	ATL8C27237:234..488	0.63					
154842	ATU016782	ATL8C17852:656..1	gap2	ATCEA4C2087_1, ATCEA4S29897	93, 93	ATL8C17852:656..78	0.63					
154843	ATU016783	ATL8C3994:609..151	gap2	ATCEA4S29658	93	ATL8C3994:574..410	0.63					
154844	ATU016784	ATL8C14857:840..1	gap2	ATCEA4S32614	93	ATL8C14857:840..484	0.63					
154845	ATU016785	ATL8C46227:1041..311	gap2	ATCEA4S34426	93	ATL8C46227:1041..340	0.63					
154846	ATU016786	ATL8C45531:1..2390	gap2	ATCEA4C30695_1, ATCEA4C28520_1	93, 84	ATL8C45531:212..2232	0.62					
154847	ATU016787	ATL8S23350:52..545	gap2	ATCEA4C122087_1	93	ATL8S23350:52..426	0.62					
154848	ATU016788	ATL8C35100:1..382	gap2	ATCEA4C13178_2	93	ATL8C35100:313..382	0.62					
154849	ATU016789	ATL8S22598:1..492	gap2	ATCEA4C1882_1	93	ATL8S22598:395..22	0.62					

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154850	ATU0167 90	ATL8C13039:817..2536	gap2	ATCEA4C42942_1	93	ATL8C13039:817..2536	0.62					
154851	ATU0167 91	ATL8C5959:1108..3982	gap2	ATCEA4S7913	93	ATL8C5959:1108..3982	0.62					
154852	ATU0167 92	ATL8C7479:316..1391	gap2	ATCEA4C68493_1	93	ATL8C7479:911..1230	0.62					
154853	ATU0167 93	ATL8C9937:1373..1875	gap2	ATCEA4C90766_1	93	ATL8C9937:1373..1707	0.61					
154854	ATU0167 94	ATL8C30269:630..53	gap2	ATCEA4C89347_1, ATCEA4S18487	93, 89	ATL8C30269:446..309	0.61					
154855	ATU0167 95	ATL8C1147:165..819	gap2	ATCEA4S34221	93	ATL8C1147:372..683	0.61					
154856	ATU0167 96	ATL8C21948:366..924	gap2	ATCEA4C116157_1	93	ATL8C21948:366..545	0.61					
154857	ATU0167 97	ATL8C34253:270..523	gap2	ATCEA4C63388_1	93	ATL8C34253:362..462	0.61					
154858	ATU0167 98	ATL8C45282:115..718	gap2	ATCEA4S2566, ATCEA4C26205_1	93, 83	ATL8C45282:653..228	0.60					
154859	ATU0167 99	ATL8C22433:1..518	gap2	ATCEA4C2947_1	93	ATL8C22433:202..409	0.60					
154860	ATU0168 00	ATL8C7721:1.	gap2	ATCEA4C13532	93	ATL8C7721:98	0.59					

		.494		7_1		..332						
154861	ATU016801	ATL8C41791:45..2100	gap2	ATCEA4C3350_1	93	ATL8C41791:45..2100	0.59					
154862	ATU016802	ATL8C7069:3823..837	gap2	ATCEA4C134971_1, ATCEA4S14078	93, 91	ATL8C7069:3823..1038	0.59					
154863	ATU016803	ATL8C46686:1896..5042	gap2	ATCEA4C118254_1	93	ATL8C46686:1916..5042	0.58					
154864	ATU016804	ATL8C50137:3655..1306	gap2	ATCEA4S1655	93	ATL8C50137:3655..1306	0.58					
154865	ATU016805	ATL8C49782:2767..1964	gap2	ATCEA4C4978_1	93	ATL8C49782:2557..2413	0.58					
154866	ATU016806	ATL8S30624:425..1	gap2	ATCEA4C12021_1	93	ATL8S30624:425..7	0.58					
154867	ATU016807	ATL8C34866:835..568	gap2	ATCEA4S5482	93	ATL8C34866:652..568	0.58					
154868	ATU016808	ATL8C21553:600..50	gap2	ATCEA4S10376	93	ATL8C21553:541..74	0.58					
154869	ATU016809	ATL8C6067:1243..285	gap2	ATCEA4C115817_1	93	ATL8C6067:932..380	0.57					
154870	ATU016810	ATL8C20021:607..1	gap2	ATCEA4C706_1	93	ATL8C20021:571..56	0.57					
154871	ATU016811	ATL8C27727:576..1	gap2	ATCEA4C50587_1	93	ATL8C27727:506..348	0.57					
154872	ATU016	ATL8C5	gap2	ATCEA4	93,	ATL8C5	0.57					

	812	982:2996..1322		S36267, ATCEA4C624_1, ATCEA4S28931, ATCEA4S18049	89, 89, 82	982:2517..1520						
154873	ATU016813	ATL8C14577:1..675	gap2	ATCEA4S10549, ATCEA4C27589_1, ATCEA4C13943_1	93, 93, 90	ATL8C14577:65..634	0.57					
154874	ATU016814	ATL8C19272:113..756	gap2	ATCEA4C27273_1, ATCEA4S2782	93, 84	ATL8C19272:148..756	0.56					
154875	ATU016815	ATL8C22799:937..200	gap2	ATCEA4S7644, ATCEA4S27570	93, 88	ATL8C22799:554..447	0.56					
154876	ATU016816	ATL8S8536:1..387	gap2	ATCEA4C7119_1	93	ATL8S8536:109..269	0.56					
154877	ATU016817	ATL8C45405:480..18	gap2	ATCEA4C22002_1	93	ATL8C45405:392..18	0.56					
154878	ATU016818	ATL8C46833:2460..1121	gap2	ATCEA4S1081	93	ATL8C46833:2452..1121	0.56					
154879	ATU016819	ATL8S4925:1..499	gap2	ATCEA4S2092	93	ATL8S4925:111..499	0.56					
154880	ATU016820	ATL8C21154:9313..2	gap2	ATCEA4S178, ATCEA4	92, 87	ATL8C21154:9313..2	0.56	g4586066	100	3160	0.0	(AC006194) putati

		123		S253		207						ve pol polypr otein, 3' partia l [Arabi dopsis thalia na]
154881	ATU016 821	ATL8C4 9096:2 619..6 3	gap2	ATCEA4 C5322_ 2, ATCEA4 C5322_ 1, ATCEA4 S27283	93, 92, 89	ATL8C4 9096:2 617..6 3	0.55					
154882	ATU016 822	ATL8C1 2466:6 28..91 7	gap2	ATCEA4 C16526 _1, ATCEA4 S36180	93, 89	ATL8C1 2466:7 11..84 1	0.55					
154883	ATU016 823	ATL8S2 5969:3 66..1	gap2	ATCEA4 C48483 _1	93	ATL8S2 5969:3 66..25 7	0.55					
154884	ATU016 824	ATL8C1 3657:5 85..88	gap2	ATCEA4 S1290	93	ATL8C1 3657:3 68..88	0.55					
154885	ATU016 825	ATL8C1 5729:4 81..61	gap2	ATCEA4 C48657 _1	93	ATL8C1 5729:4 61..61	0.55					
154886	ATU016 826	ATL8C1 3550:2 10..38 75	gap2	ATCEA4 S27393	92	ATL8C1 3550:2 10..38 75	0.55	g33778 30	100	2485	1.1e-191	(AF075 598) contai ns simila rity to Aplysi a calif o rnica

												intermediate filament protein A (GB:X60297) [Arabidopsis thaliana]
154887	ATU016827	ATL8S28681:77..496	gap2	ATCEA4C17111_1, ATCEA4C17111_3	93, 84	ATL8S28681:82..425	0.55					
154888	ATU016828	ATL8C37378:2176..1359	gap2	ATCEA4S28779, ATCEA4S9008, ATCEA4S10502	93, 83, 83	ATL8C37378:1940..1580	0.55					
154889	ATU016829	ATL8S4317:53..387	gap2	ATCEA4C19503_1	93	ATL8S4317:59..239	0.55					
154890	ATU016830	ATL8C21181:162..616	gap2	ATCEA4C6825_1	93	ATL8C21181:266..616	0.54					
154891	ATU016831	ATL8C48618:1035..360	gap2	ATCEA4S30372	93	ATL8C48618:1035..360	0.54					
154892	ATU016832	ATL8C47000:11843..1590	gap2	ATCEA4S27399, ATCEA4S344	92, 91	ATL8C47000:4632..1663, ATL8C47000:11843..7931	0.54, 0.70	g4263544, g4038066, g4006823	100, 100, 99	4574, 690, 759	0.0, 5.9e-23, 2.4e-67	(AC006250) putative Athila retroelement ORF1

												protein [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabidopsis thaliana]; (AC005970) hypothetical protein [Arabidopsis thaliana]
154893	ATU016833	ATL8C10650:33..1315	gap2	ATCEA4S4027	92	ATL8C10650:125..1243	0.53	g3128209	100	1544		(AC004077) unknown protein [Arabidopsis thaliana]
154894	ATU016834	ATL8C46454:461..1	gap2	ATCEA4S4479	93	ATL8C46454:231..125	0.53					
154895	ATU016835	ATL8C1247:688..2070	gap2	ATCEA4C437_1	93	ATL8C1247:688..1916	0.52					
154896	ATU016	ATL8C2	gap2	ATCEA4	93	ATL8C2	0.52					

	836	1154:763..1431		S12828		1154:763..1367						
154897	ATU016837	ATL8C23319:3763..335	gap2	ATCEA4S81	92	ATL8C23319:3763..335	0.51	g4567296	100	2395	3.1e-215	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
154898	ATU016838	ATL8C22651:447..651	gap2	ATCEA4C51113_1	93	ATL8C22651:484..615	0.51					
154899	ATU016839	ATL8S27901:1..205	gap2	ATCEA4C117474_1	93	ATL8S27901:87..192	0.51					
154900	ATU016840	ATL8S29304:1..190	gap2	ATCEA4S32498, ATCEA4C491_1, ATCEA4S36256	93, 93, 88	ATL8S29304:77..190	0.51					
154901	ATU016841	ATL8C24992:1..832	gap2	ATCEA4C210641	93	ATL8C24992:58..757	0.50					
154902	ATU016842	ATL8C4374:1089..2196	gap2	ATCEA4C7411_1	93	ATL8C4374:1089..2196	0.50					
154903	ATU016843	ATL8C29134:431..1278	gap2	ATCEA4S34865	93	ATL8C29134:431..1278	0.50					
154904	ATU016	ATL8C2	gap2	ATCEA4	93	ATL8C2	0.50					

	844	3529:344..100		S3078		3529:325..100						
154905	ATU016845	ATL8C34215:1..614	gap2	ATCEA4C811_1	93	ATL8C34215:168..612	0.50					
154906	ATU016846	ATL8C36638:1396..236	gap2	ATCEA4C32739_1	93	ATL8C36638:1396..362	0.49					
154907	ATU016847	ATL8C44636:1817..112	gap2	ATCEA4S33792	93	ATL8C44636:1451..112	0.49					
154908	ATU016848	ATL8C22009:694..95	gap2	ATCEA4C11200_1, ATCEA4C11200_2	93, 87	ATL8C22009:523..246	0.49					
154909	ATU016849	ATL8C47052:8875..1704	gap2	ATCEA4C116716_2, ATCEA4S28643, ATCEA4S35032	92, 89, 86	ATL8C47052:8875..1704	0.48	g4512631	100	719	1.3e-78	(AC004793) Contains similarity to [Arabidopsis thaliana]
154910	ATU016850	ATL8C32817:60..1251	gap2	ATCEA4S12984	93	ATL8C32817:333..1251	0.48					
154911	ATU016851	ATL8C35992:234..1171	gap2	ATCEA4C475_2, ATCEA4C475_1	93, 92	ATL8C35992:304..809	0.48					
154912	ATU016852	ATL8C22441:3682..1	gap2	ATCEA4S14670	92	ATL8C22441:3592..1	0.47	g3912924	100	2926	3.8e-295	(AF001308) CHP-

		481				481						rich hypothetical protein similar to T10M13.17.1 [Arabidopsis thaliana]
154913	ATU0168 53	ATL8C28650:1..762	gap2	ATCEA4S35624	93	ATL8C28650:32..762	0.47					
154914	ATU0168 54	ATL8C38859:311..574	gap2	ATCEA4S30856	93	ATL8C38859:341..566	0.46					
154915	ATU0168 55	ATL8C43950:532..888	gap2	ATCEA4S27401	93	ATL8C43950:532..831	0.46					
154916	ATU0168 56	ATL8C18980:1640..692	gap2	ATCEA4C15938_1	93	ATL8C18980:1637..1555	0.45					
154917	ATU0168 57	ATL8C12435:363..1	gap2	ATCEA4C7511_1	93	ATL8C12435:236..29	0.45					
154918	ATU0168 58	ATL8C4024:490..3749	gap2	ATCEA4S179, ATCEA4S11082	92, 88	ATL8C4024:1994..2786, ATL8C4024:2910..3749	0.45, 0.50	g3047073	100	2447	7.0e-225	(AF058825) contains similarity to retrotransposon-like proteins

												[Arabidopsis thaliana]
154919	ATU016859	ATL8C25227:1060..104	gap2	ATCEA4S6073	93	ATL8C25227:968..104	0.45					
154920	ATU016860	ATL8C12014:1..670	gap2	ATCEA4C27651_1	93	ATL8C12014:29..670	0.44					
154921	ATU016861	ATL8C21103:88..550	gap2	ATCEA4C5249_1	93	ATL8C21103:196..521	0.44					
154922	ATU016862	ATL8S27113:161..617	gap2	ATCEA4C9924_1	93	ATL8S27113:186..265	0.44					
154923	ATU016863	ATL8C22862:552..1805	gap2	ATCEA4C780_1, ATCEA4S25034, ATCEA4S34784, ATCEA4S31516	93, 89, 86, 83	ATL8C22862:574..1724	0.43					
154924	ATU016864	ATL8S23914:1..258	gap2	ATCEA4C30394_1	93	ATL8S23914:256..10	0.43					
154925	ATU016865	ATL8C2214:23..1338	gap2	ATCEA4C28274_1	93	ATL8C2214:1338..23	0.43					
154926	ATU016866	ATL8C28568:413..1	gap2	ATCEA4C397_1, ATCEA4C25292_1	93, 83	ATL8C28568:355..237	0.42					
154927	ATU016867	ATL8C4482:72	gap2	ATCEA4C300_1	93	ATL8C4482:72	0.42					

		8..1303				8..1234						
154928	ATU016868	ATL8S755:1..605	gap2	ATCEA4C764_1	93	ATL8S755:131..429	0.42					
154929	ATU016869	ATL8C22574:1..928	gap2	ATCEA4S29367	93	ATL8C22574:48..928	0.41					
154930	ATU016870	ATL8C3996:672..318	gap2	ATCEA4S31240	93	ATL8C3996:498..318	0.41					
154931	ATU016871	ATL8C11441:280..1791	gap2	ATCEA4C60023_1	93	ATL8C11441:280..1613	0.40					
154932	ATU016872	ATL8S15375:115..273	gap2	ATCEA4C44998_1	93	ATL8S15375:115..202	0.40					
154933	ATU016873	ATL8C49067:1839..1	gap2	ATCEA4S32413	93	ATL8C49067:1839..689	0.40					
154934	ATU016874	ATL8C38827:737..800	gap2	ATCEA4S5335	93							
154935	ATU016875	ATL8C25080:1090..1236	gap2	ATCEA4S15553	93							
154936	ATU016876	ATL8C31:2101..2451	gap2	ATCEA4S11399, ATCEA4C45350_1	93, 86							
154937	ATU016877	ATL8C31892:1112..1371	gap2	ATCEA4C18362_1, ATCEA4S22400	93, 82							
154938	ATU016878	ATL8S12315:4	gap2	ATCEA4C60208	93							

		15..518		_1								
154939	ATU016879	ATL8C44078:1..624	gap2	ATCEA4C4635_5, ATCEA4C4635_1	93, 82							
154940	ATU016880	ATL8C13355:504..702	gap2	ATCEA4S31852	93							
154941	ATU016881	ATL8C39143:2764..2147	gap2	ATCEA4S30899	93							
154942	ATU016882	ATL8C39329:1..122	gap2	ATCEA4S29554	93							
154943	ATU016883	ATL8C39347:132..1	gap2	ATCEA4C120198_1	93							
154944	ATU016884	ATL8C39542:3256..2692	gap2	ATCEA4C121074_1	93							
154945	ATU016885	ATL8C24980:1..726	gap2	ATCEA4S26984	93							
154946	ATU016886	ATL8C38212:402..898	gap2	ATCEA4S31380, ATCEA4S33032	93, 84							
154947	ATU016887	ATL8C38204:1058..1373	gap2	ATCEA4S35131, ATCEA4S28732	93, 84							
154948	ATU016888	ATL8C18922:341..1	gap2	ATCEA4S3624, ATCEA4S5067	93, 88							
154949	ATU016	ATL8C3	gap2	ATCEA4	93							

	889	9654:205..613		C120192_1								
154950	ATU016890	ATL8C47838:2314..2733	gap2	ATCEA4C24857_1	93							
154951	ATU016891	ATL8C2492:1177..1464	gap2	ATCEA4S14822	93							
154952	ATU016892	ATL8C17951:895..647	gap2	ATCEA4S22675	93							
154953	ATU016893	ATL8C35544:1000..774	gap2	ATCEA4S27124	93							
154954	ATU016894	ATL8C17941:212..1	gap2	ATCEA4S31262	93							
154955	ATU016895	ATL8C39881:168..636	gap2	ATCEA4S27353	93							
154956	ATU016896	ATL8C5885:2266..2331	gap2	ATCEA4C78019_3	93							
154957	ATU016897	ATL8C39948:1..86	gap2	ATCEA4C61254_1	93							
154958	ATU016898	ATL8C35509:189..775	gap2	ATCEA4C135411_1	93							
154959	ATU016899	ATL8C15961:1..65	gap2	ATCEA4C24465_1	93							
154960	ATU016900	ATL8C30857:1236..405	gap2	ATCEA4S29575	93							

154961	ATU016901	ATL8C24834:179..61	gap2	ATCEA4S7887	93							
154962	ATU016902	ATL8C30848:1526..932	gap2	ATCEA4S34673	93							
154963	ATU016903	ATL8C4012:305..425	gap2	ATCEA4S301	93							
154964	ATU016904	ATL8C6390:1166..419	gap2	ATCEA4C33416_1	93							
154965	ATU016905	ATL8C24827:2093..1406	gap2	ATCEA4C128000_1	93							
154966	ATU016906	ATL8C40160:933..800	gap2	ATCEA4S12949	93							
154967	ATU016907	ATL8C17770:1131..1454	gap2	ATCEA4C29704_1	93							
154968	ATU016908	ATL8C30806:59..174	gap2	ATCEA4C40018_1	93							
154969	ATU016909	ATL8C40243:548..1	gap2	ATCEA4C311_1	93							
154970	ATU016910	ATL8C30796:473..570	gap2	ATCEA4S34157	93							
154971	ATU016911	ATL8C21192:1..133	gap2	ATCEA4C5263_1	93							
154972	ATU016912	ATL8S4609:1..277	gap2	ATCEA4C7440_1, ATCEA4S14528	93, 85							

154973	ATU016913	ATL8C30763:312..774	gap2	ATCEA4S10277	93							
154974	ATU016914	ATL8C40335:1..223	gap2	ATCEA4S30248	93							
154975	ATU016915	ATL8C47808:2170..2006	gap2	ATCEA4S4723	93							
154976	ATU016916	ATL8C40337:626..453	gap2	ATCEA4S10367	93							
154977	ATU016917	ATL8C5917:1..358	gap2	ATCEA4C62402_2, ATCEA4C62402_1	93, 83							
154978	ATU016918	ATL8C45773:505..567	gap2	ATCEA4C3619_1	93							
154979	ATU016919	ATL8C24766:969..1292	gap2	ATCEA4S12775	93							
154980	ATU016920	ATL8C17605:579..130	gap2	ATCEA4C120074_1	93							
154981	ATU016921	ATL8C11361:305..1	gap2	ATCEA4S24008	93							
154982	ATU016922	ATL8C40507:84..661	gap2	ATCEA4S34656	93							
154983	ATU016923	ATL8C1136:806..956	gap2	ATCEA4S547	93							
154984	ATU016924	ATL8C17576:4	gap2	ATCEA4C10378	93							

		29..847		3_1								
154985	ATU016925	ATL8C19561:644..970	gap2	ATCEA4C28184_1	93							
154986	ATU016926	ATL8C24646:1..205	gap2	ATCEA4C80299_1	93							
154987	ATU016927	ATL8C1754:765..638	gap2	ATCEA4S11260	93							
154988	ATU016928	ATL8C17533:63..254	gap2	ATCEA4S27082	93							
154989	ATU016929	ATL8S30870:629..384	gap2	ATCEA4S33237, ATCEA4C28531_2, ATCEA4C28531_1	93, 92, 91							
154990	ATU016930	ATL8C17491:1673..1776	gap2	ATCEA4C63_1	93							
154991	ATU016931	ATL8C11352:505..170	gap2	ATCEA4S30146	93							
154992	ATU016932	ATL8S30745:432..324	gap2	ATCEA4C50718_1	93							
154993	ATU016933	ATL8C5099:555..713	gap2	ATCEA4C2022_1	93							
154994	ATU016934	ATL8C8922:4912..5014	gap2	ATCEA4C92223_1	93							
154995	ATU016	ATL8C4	gap2	ATCEA4	93, 89							

	935	5628:4 46..12 52		C11874 9_1, ATCEA4 C11874 9_2								
154996	ATU016 936	ATL8S6 252:17 4..1	gap2	ATCEA4 C11418 8_1	93							
154997	ATU016 937	ATL8C1 3654:2 14..28 9	gap2	ATCEA4 S33608	93							
154998	ATU016 938	ATL8C1 3726:7 51..92 6	gap2	ATCEA4 S10357	93							
154999	ATU016 939	ATL8C4 1498:1 ..91	gap2	ATCEA4 S11350	93							
155000	ATU016 940	ATL8C3 5259:5 39..14 7	gap2	ATCEA4 S34253	93							
155001	ATU016 941	ATL8C6 540:11 36..12 04	gap2	ATCEA4 C34539 _1	93							
155002	ATU016 942	ATL8S1 4888:1 ..671	gap2	ATCEA4 C657_1 , ATCEA4 S33292 , ATCEA4 S31587	93, 93, 83							
155003	ATU016 943	ATL8C1 5361:1 ..869	gap2	ATCEA4 S15160 , ATCEA4 S16868 , ATCEA4 S1056, ATCEA4	93, 92, 90, 89, 88, 86, 86, 84, 83,							

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				S15142, ATCEA4S14249, ATCEA4S14092, ATCEA4S28270, ATCEA4S13363, ATCEA4S13287, ATCEA4S1207, ATCEA4S13593	83, 82							
155004	ATU016944	ATL8C17191:503..1188	gap2	ATCEA4C19877_1	93							
155005	ATU016945	ATL8C30276:1..290	gap2	ATCEA4S30641	93							
155006	ATU016946	ATL8C23249:473..1	gap2	ATCEA4S30731, ATCEA4C1537_1	93, 91							
155007	ATU016947	ATL8C39943:644..419	gap2	ATCEA4C3928_2	93							
155008	ATU016948	ATL8C12825:1442..1588	gap2	ATCEA4S33135, ATCEA4C116595_1	93, 89							

155009	ATU016949	ATL8C41976:2938..2583	gap2	ATCEA4S178	93							
155010	ATU016950	ATL8C13898:883..601	gap2	ATCEA4C17038_1	93							
155011	ATU016951	ATL8C42001:1022..915	gap2	ATCEA4S34826	93							
155012	ATU016952	ATL8C42081:569..373	gap2	ATCEA4S29552	93							
155013	ATU016953	ATL8C11311:999..580	gap2	ATCEA4S4397	93							
155014	ATU016954	ATL8C15277:1038..1122	gap2	ATCEA4C20237_1	93							
155015	ATU016955	ATL8C42284:1180..431	gap2	ATCEA4C126653_1	93							
155016	ATU016956	ATL8C42316:372..878	gap2	ATCEA4C117177_1	93							
155017	ATU016957	ATL8C10064:85..384	gap2	ATCEA4S26224	93							
155018	ATU016958	ATL8C4233:635..309	gap2	ATCEA4S33539	93							
155019	ATU016959	ATL8C42347:3265..2844	gap2	ATCEA4S31543	93							
155020	ATU016960	ATL8C30097:1	gap2	ATCEA4S12562	93							

		420..1622										
155021	ATU016961	ATL8C15159:1163..1003	gap2	ATCEA4C53761_2, ATCEA4C53761_1	93, 92							
155022	ATU016962	ATL8C42506:141..17	gap2	ATCEA4S33849	93							
155023	ATU016963	ATL8C24081:841..156	gap2	ATCEA4C10821_1	93							
155024	ATU016964	ATL8C42588:1043..1154	gap2	ATCEA4S15343	93							
155025	ATU016965	ATL8C48724:388..1	gap2	ATCEA4C9046_1, ATCEA4S33835	93, 86							
155026	ATU016966	ATL8C45233:258..1	gap2	ATCEA4C7719_1	93							
155027	ATU016967	ATL8C5241:1209..1303	gap2	ATCEA4S36333, ATCEA4S36332	93, 93							
155028	ATU016968	ATL8C24019:1088..849	gap2	ATCEA4S32370	93							
155029	ATU016969	ATL8C4325:1500..2187	gap2	ATCEA4C29690_1	93							
155030	ATU016970	ATL8C43313:969..400	gap2	ATCEA4S28840	93							

155031	ATU0169 71	ATL8C43 336:1..253	gap2	ATCEA4S178	93							
155032	ATU0169 72	ATL8C14 072:3481..3691	gap2	ATCEA4S29944	93							
155033	ATU0169 73	ATL8C29 243:426..63	gap2	ATCEA4C10783_3	93							
155034	ATU0169 74	ATL8C43 531:1033..1490	gap2	ATCEA4C47475_1, ATCEA4S6032	93, 83							
155035	ATU0169 75	ATL8C23 847:766..1212	gap2	ATCEA4C11616_1	93							
155036	ATU0169 76	ATL8C47 685:249..1	gap2	ATCEA4S31034	93							
155037	ATU0169 77	ATL8C4635:136..451	gap2	ATCEA4C472_1	93							
155038	ATU0169 78	ATL8C43 744:182..1	gap2	ATCEA4S4526	93							
155039	ATU0169 79	ATL8C29 833:99..1	gap2	ATCEA4S8357	93							
155040	ATU0169 80	ATL8C350:1088..1405	gap2	ATCEA4S5363	93							
155041	ATU0169 81	ATL8C14 108:562..1005	gap2	ATCEA4S34839	93							
155042	ATU0169 82	ATL8C43 894:1..75	gap2	ATCEA4S2709	93							
155043	ATU0169 83	ATL8C23 802:1	gap2	ATCEA4S31762	93							

		099..1453										
155044	ATU016984	ATL8C16755:2233..1808	gap2	ATCEA4S14821	93							
155045	ATU016985	ATL8C16716:1523..719	gap2	ATCEA4C9073_1	93							
155046	ATU016986	ATL8C12636:497..32	gap2	ATCEA4C95196_1	93							
155047	ATU016987	ATL8C43956:842..482	gap2	ATCEA4S29977	93							
155048	ATU016988	ATL8C1480:1530..1195	gap2	ATCEA4S27485, ATCEA4S33014	93, 91							
155049	ATU016989	ATL8C45019:667..1	gap2	ATCEA4S15807, ATCEA4C4561_1, ATCEA4S24286, ATCEA4S34675, ATCEA4C4561_2	93, 91, 89, 89, 83							
155050	ATU016990	ATL8C25263:211..1	gap2	ATCEA4C3998_1	93							
155051	ATU016991	ATL8C16661:587..997	gap2	ATCEA4S3793	93							

155052	ATU0169 92	ATL8C43853:1..348	gap2	ATCEA4C815_1	93							
155053	ATU0169 93	ATL8C34876:261..171	gap2	ATCEA4S6685	93							
155054	ATU0169 94	ATL8C44405:748..126	gap2	ATCEA4S17250	93							
155055	ATU0169 95	ATL8C44444:1255..1853	gap2	ATCEA4C19118_1	93							
155056	ATU0169 96	ATL8C2970:371..574	gap2	ATCEA4S6377	93							
155057	ATU0169 97	ATL8C24330:1837..2777	gap2	ATCEA4S6239	92			g4836444	100	1291	1.1e-125	(AF121877) DesB [Arabidopsis thaliana]
155058	ATU0169 98	ATL8C16588:250..635	gap2	ATCEA4C14710_1	93							
155059	ATU0169 99	ATL8C17722:530..1	gap2	ATCEA4C596_1	93							
155060	ATU0170 00	ATL8C44596:131..1	gap2	ATCEA4S5141	93							
155061	ATU0170 01	ATL8C23610:1090..524	gap2	ATCEA4S20914	93							
155062	ATU0170 02	ATL8C44657:208..609	gap2	ATCEA4C97259_1	93							
155063	ATU017	ATL8C1	gap2	ATCEA4	93, 91							

	003	3679:1..649		C7948_1, ATCEA4 C7948_2								
155064	ATU017004	ATL8C4 7569:225..1	gap2	ATCEA4 S16249	93							
155065	ATU017005	ATL8C2 3558:1298..852	gap2	ATCEA4 S32273	93							
155066	ATU017006	ATL8C1 2107:429..103	gap2	ATCEA4 C21152_1	93							
155067	ATU017007	ATL8C4 4012:804..257	gap2	ATCEA4 C24689_1, ATCEA4 S19571	93, 84							
155068	ATU017008	ATL8C3 6047:1484..1718	gap2	ATCEA4 C31278_2	93							
155069	ATU017009	ATL8C1 4206:1099..39	gap2	ATCEA4 C27962_1	93							
155070	ATU017010	ATL8C4 7551:1..783	gap2	ATCEA4 C110035_1	93							
155071	ATU017011	ATL8C2 3490:1418..1522	gap2	ATCEA4 S2732	93							
155072	ATU017012	ATL8C2 348:2823..3070	gap2	ATCEA4 C23572_1	93							
155073	ATU017013	ATL8C2 9458:198..1	gap2	ATCEA4 C60007_2	93							
155074	ATU017	ATL8C4	gap2	ATCEA4	93							

	014	4867:3 87..72		S4533								
155075	ATU017 015	ATL8C3 4713:3 43..1	gap2	ATCEA4 S26237	93							
155076	ATU017 016	ATL8C2 343:20 6..1	gap2	ATCEA4 C6283_ 1	93							
155077	ATU017 017	ATL8S2 2186:2 47..48 1	gap2	ATCEA4 C5023_ 1	93							
155078	ATU017 018	ATL8C1 6444:1 078..2 87	gap2	ATCEA4 C17030 _1	93							
155079	ATU017 019	ATL8C4 4983:6 25..1	gap2	ATCEA4 C19808 _1	93							
155080	ATU017 020	ATL8C4 4586:1 ..334	gap2	ATCEA4 S26619 , ATCEA4 S3074	93, 90							
155081	ATU017 021	ATL8C4 4161:1 ..403	gap2	ATCEA4 C5552_ 1, ATCEA4 S26098 , ATCEA4 S30451	93, 90, 83							
155082	ATU017 022	ATL8C4 4162:1 ..377	gap2	ATCEA4 S25253 , ATCEA4 S29479 , ATCEA4 S13941 , ATCEA4 S1247	93, 88, 87, 82							
155083	ATU017	ATL8C1	gap2	ATCEA4	93							

	023	1258:970..1061		S12414								
155084	ATU017024	ATL8C11804:125..684	gap2	ATCEA4C22126_1	93							
155085	ATU017025	ATL8C29356:558..1402	gap2	ATCEA4S2276	93							
155086	ATU017026	ATL8C29341:937..1079	gap2	ATCEA4S22331	93							
155087	ATU017027	ATL8C14345:2944..3278	gap2	ATCEA4S10649	93							
155088	ATU017028	ATL8C45150:183..1	gap2	ATCEA4S34682	93							
155089	ATU017029	ATL8C45184:186..1	gap2	ATCEA4S34715	93							
155090	ATU017030	ATL8C19424:2040..3921	gap2	ATCEA4S10250, ATCEA4S9139	92, 90			g3927833	100	2370	6.4e-229	(AC005727) putative cytochrome P450 [Arabidopsis thaliana]
155091	ATU017031	ATL8C45293:1..131	gap2	ATCEA4S11440	93							
155092	ATU017032	ATL8C408:819..1	gap2	ATCEA4C8999_1	93							
155093	ATU017033	ATL8C16363:8	gap2	ATCEA4C10569	93							

		4..569		3_1								
155094	ATU0170034	ATL8C29329:704..504	gap2	ATCEA4S13812	93							
155095	ATU0170035	ATL8C14526:1..148	gap2	ATCEA4S17752	93							
155096	ATU0170036	ATL8C2745:3800..362	gap2	ATCEA4S178, ATCEA4S253	92, 87			g4038066, g3319360	100, 43	481, 1421	1.5e-24, 1.5e-138	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AF077408) contains similarity to Vicia faba retrotranspo son-like gene (GB:AB007467) [Arabidopsis thaliana]
155097	ATU0170037	ATL8C29311:1071..249	gap2	ATCEA4S1037	93							
155098	ATU017	ATL8C2	gap2	ATCEA4	93							

	038	9310:353..638		S17852								
155099	ATU017039	ATL8S1947:1..64	gap2	ATCEA4S4723	93							
155100	ATU017040	ATL8C45656:750..1154	gap2	ATCEA4C71194_1	93							
155101	ATU017041	ATL8C14557:1299..917	gap2	ATCEA4S4509	93							
155102	ATU017042	ATL8S20457:566..96	gap2	ATCEA4C28620_1	93							
155103	ATU017043	ATL8C2320:2231..1847	gap2	ATCEA4C88394_1	93							
155104	ATU017044	ATL8C29254:275..514	gap2	ATCEA4S17558	93							
155105	ATU017045	ATL8C1428:4049..4182	gap2	ATCEA4S27285,ATCEA4S34054	93, 92							
155106	ATU017046	ATL8C34506:11083..775	gap2	ATCEA4S29480	93							
155107	ATU017047	ATL8S3545:89..167	gap2	ATCEA4S674	93							
155108	ATU017048	ATL8C45832:1776..2336	gap2	ATCEA4C14738_1	93							
155109	ATU017049	ATL8C4586:257..1	gap2	ATCEA4C118258_1	93							

155110	ATU017050	ATL8C21463:804..706	gap2	ATCEA4C26066_1	93							
155111	ATU017051	ATL8C29154:128..73	gap2	ATCEA4S30304	93							
155112	ATU017052	ATL8S21073:1..341	gap2	ATCEA4S14396	93							
155113	ATU017053	ATL8C3449:1728..1416	gap2	ATCEA4S13164	93							
155114	ATU017054	ATL8S21144:330..1	gap2	ATCEA4C34729_1	93							
155115	ATU017055	ATL8S21172:55..403	gap2	ATCEA4C16472_1	93							
155116	ATU017056	ATL8S21234:76..1	gap2	ATCEA4S35993	93							
155117	ATU017057	ATL8C29073:786..1156	gap2	ATCEA4S21037	93							
155118	ATU017058	ATL8C23073:497..151	gap2	ATCEA4S4524	93							
155119	ATU017059	ATL8S21426:1..370	gap2	ATCEA4S36355	93							
155120	ATU017060	ATL8S21433:1..216	gap2	ATCEA4S16040	93							
155121	ATU017061	ATL8S21700:1..121	gap2	ATCEA4S4795	93							
155122	ATU017062	ATL8S21850:258..1	gap2	ATCEA4S14180	93							
155123	ATU017	ATL8S2	gap2	ATCEA4	93							

	063	2028:435..582		S4797								
155124	ATU017064	ATL8S2 2201:291..523	gap2	ATCEA4 S17102	93							
155125	ATU017065	ATL8C2 297:257..1	gap2	ATCEA4 C396171	93							
155126	ATU017066	ATL8S2 2528:569..1	gap2	ATCEA4 C365371	93							
155127	ATU017067	ATL8S2 258:80..1	gap2	ATCEA4 S35993	93							
155128	ATU017068	ATL8C4 6222:266..549	gap2	ATCEA4 S25819	93							
155129	ATU017069	ATL8C1 4447:5994..5639	gap2	ATCEA4 S178	93							
155130	ATU017070	ATL8C1 1183:426..1	gap2	ATCEA4 S32570	93							
155131	ATU017071	ATL8S2 27:283..644	gap2	ATCEA4 S27429	93							
155132	ATU017072	ATL8C4 6247:1..79	gap2	ATCEA4 S26547	93							
155133	ATU017073	ATL8S2 3191:280..517	gap2	ATCEA4 S8821	93							
155134	ATU017074	ATL8S2 3259:258..584	gap2	ATCEA4 S34487	93							
155135	ATU017075	ATL8C9 276:1..92	gap2	ATCEA4 C271151	93							

155136	ATU017076	ATL8C19537:1..158	gap2	ATCEA4C4361_1	93							
155137	ATU017077	ATL8S2339:133..426	gap2	ATCEA4S7723	93							
155138	ATU017078	ATL8C4645:1..379	gap2	ATCEA4C4715_1	93							
155139	ATU017079	ATL8S23543:623..355	gap2	ATCEA4C18664_1	93							
155140	ATU017080	ATL8C46476:504..814	gap2	ATCEA4S17881	93							
155141	ATU017081	ATL8S23618:548..289	gap2	ATCEA4C84276_1	93							
155142	ATU017082	ATL8S24149:1..219	gap2	ATCEA4S29321	93							
155143	ATU017083	ATL8S24169:1..99	gap2	ATCEA4S12868	93							
155144	ATU017084	ATL8S24309:619..484	gap2	ATCEA4S1205	93							
155145	ATU017085	ATL8S24441:388..490	gap2	ATCEA4S36215	93							
155146	ATU017086	ATL8S24572:225..462	gap2	ATCEA4S2614	93							
155147	ATU017087	ATL8S25115:1..352	gap2	ATCEA4C99581_1	93							
155148	ATU017088	ATL8C17865:8	gap2	ATCEA4C978_5	93							

		75..1										
155149	ATU017089	ATL8S25501:92..490	gap2	ATCEA4C116583_1	93							
155150	ATU017090	ATL8S2552:638..383	gap2	ATCEA4C4309_1	93							
155151	ATU017091	ATL8S25546:1..516	gap2	ATCEA4C9992_1	93							
155152	ATU017092	ATL8C21970:782..645	gap2	ATCEA4C98343_1	93							
155153	ATU017093	ATL8C46779:137..530	gap2	ATCEA4C46896_1	93							
155154	ATU017094	ATL8S27543:414..588	gap2	ATCEA4S26328	93							
155155	ATU017095	ATL8C26783:568..734	gap2	ATCEA4C46895_1	93							
155156	ATU017096	ATL8C15965:200..1	gap2	ATCEA4C35254_1	93							
155157	ATU017097	ATL8S27732:405..188	gap2	ATCEA4S268	93							
155158	ATU017098	ATL8C4683:746..1	gap2	ATCEA4S9724	93							
155159	ATU017099	ATL8S28376:450..181	gap2	ATCEA4S30408	93							
155160	ATU017100	ATL8S3467:1..164	gap2	ATCEA4C51135_1	93							
155161	ATU017	ATL8C2	gap2	ATCEA4	93							

	101	2662:1..307		S17909								
155162	ATU0171102	ATL8S28720:1..117	gap2	ATCEA4C102605_1	93							
155163	ATU0171103	ATL8C26889:203..1	gap2	ATCEA4C11096_1	93							
155164	ATU0171104	ATL8S12286:98..1	gap2	ATCEA4C9558_1	93							
155165	ATU0171105	ATL8C28743:717..560	gap2	ATCEA4C68144_1	93							
155166	ATU0171106	ATL8C4692:1137..1	gap2	ATCEA4C29886_1	93							
155167	ATU0171107	ATL8S25741:466..594	gap2	ATCEA4C39083_1	93							
155168	ATU0171108	ATL8S29336:57..530	gap2	ATCEA4C111073_1	93							
155169	ATU0171109	ATL8S29566:72..383	gap2	ATCEA4C4918_1	93							
155170	ATU0171110	ATL8S29936:1..285	gap2	ATCEA4S34868	93							
155171	ATU0171111	ATL8C34206:1895..1428	gap2	ATCEA4C127237_1	93							
155172	ATU0171112	ATL8S30779:151..443	gap2	ATCEA4S25979	93							
155173	ATU0171113	ATL8C35847:1451..589	gap2	ATCEA4C15506_1, ATCEA4C10154	93, 91							

				0_2								
155174	ATU017114	ATL8S30808:1..85	gap2	ATCEA4S26453	93							
155175	ATU017115	ATL8C28693:398..219	gap2	ATCEA4S35716	93							
155176	ATU017116	ATL8C22556:361..684	gap2	ATCEA4S14582	93							
155177	ATU017117	ATL8S30832:1..241	gap2	ATCEA4C157935_1	93							
155178	ATU017118	ATL8C47148:193..586	gap2	ATCEA4C20333_1	93							
155179	ATU017119	ATL8S30950:188..1	gap2	ATCEA4S32154	93							
155180	ATU017120	ATL8S30953:301..478	gap2	ATCEA4S32218	93							
155181	ATU017121	ATL8C24152:1935..833	gap2	ATCEA4S35101	92			g4538981	100	134	0.00013	(AL049487) putative protein [Arabidopsis thaliana]
155182	ATU017122	ATL8C22510:15..454	gap2	ATCEA4C103976_1	93							
155183	ATU017123	ATL8C1577:1979..1560	gap2	ATCEA4C21292_2	93							
155184	ATU017	ATL8S3	gap2	ATCEA4	93							

	124	1027:60..415		S12694								
155185	ATU017125	ATL8S31039:373..577	gap2	ATCEA4S26006	93							
155186	ATU017126	ATL8S3239:126..335	gap2	ATCEA4S11642	93							
155187	ATU017127	ATL8S3288:155..476	gap2	ATCEA4S20561	93							
155188	ATU017128	ATL8C22457:626..445	gap2	ATCEA4S586	93							
155189	ATU017129	ATL8S336:1..126	gap2	ATCEA4S18025	93							
155190	ATU017130	ATL8S7562:316..103	gap2	ATCEA4C15664_1	93							
155191	ATU017131	ATL8C15488:1..443	gap2	ATCEA4C40962_1	93							
155192	ATU017132	ATL8C1193:996..1398	gap2	ATCEA4S10269	93							
155193	ATU017133	ATL8C1358:6416..6819	gap2	ATCEA4S26069,ATCEA4S20209	93, 84							
155194	ATU017134	ATL8S23718:1..464	gap2	ATCEA4C26956_1	93							
155195	ATU017135	ATL8S8400:1..337	gap2	ATCEA4S10632	93							
155196	ATU017136	ATL8C15469:126..217	gap2	ATCEA4S13894	93							

155197	ATU017137	ATL8C15461:659..952	gap2	ATCEA4S4842	93							
155198	ATU017138	ATL8S8438:209..124	gap2	ATCEA4S36264	93							
155199	ATU017139	ATL8C22234:1432..1866	gap2	ATCEA4C15190_1	93							
155200	ATU017140	ATL8C28411:639..366	gap2	ATCEA4C112897_1	93							
155201	ATU017141	ATL8C25100:423..557	gap2	ATCEA4C2702_1	93							
155202	ATU017142	ATL8C11923:1..84	gap2	ATCEA4C83_17,ATCEA4S17308	93, 92							
155203	ATU017143	ATL8C22171:259..1	gap2	ATCEA4S36221	93							
155204	ATU017144	ATL8S9128:240..600	gap2	ATCEA4S23805	93							
155205	ATU017145	ATL8S9501:1..385	gap2	ATCEA4C133359_1	93							
155206	ATU017146	ATL8S9591:545..212	gap2	ATCEA4S13117	93							
155207	ATU017147	ATL8C49028:1389..420	gap2	ATCEA4C26342_1,ATCEA4S14683	93, 85							
155208	ATU017148	ATL8S9625:303..1	gap2	ATCEA4S28657	93							

155209	ATU0171 49	ATL8S9 594:1. .527	gap2	ATCEA4 C37663 _1, ATCEA4 S13059	93, 89							
155210	ATU0171 50	ATL8S9 737:67 3..480	gap2	ATCEA4 S35786	93							
155211	ATU0171 51	ATL8C1 1997:2 75..67	gap2	ATCEA4 C5200_ 1	93							
155212	ATU0171 52	ATL8C1 9710:2 77..64 2	gap2	ATCEA4 C74934 _1	93							
155213	ATU0171 53	ATL8C1 3492:4 559..4 802	gap2	ATCEA4 C3943_ 1	93							
155214	ATU0171 54	ATL8C1 1797:2 155..2 316	gap2	ATCEA4 C11805 _1	93							
155215	ATU0171 55	ATL8C4 8232:8 24..91 3	gap2	ATCEA4 S31969	93							
155216	ATU0171 56	ATL8C4 8268:1 96..50 8	gap2	ATCEA4 C11832 4_1	93							
155217	ATU0171 57	ATL8C1 5184:1 ..198	gap2	ATCEA4 S30541	93							
155218	ATU0171 58	ATL8C4 84:194 0..167 2	gap2	ATCEA4 S1400	93							
155219	ATU0171 59	ATL8C2 2022:1 ..259	gap2	ATCEA4 S24054	93							
155220	ATU0171 60	ATL8S2 9608:4 35..26	gap2	ATCEA4 C10669 _1	93							

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155221	ATU017161	ATL8C48578:848..1255	gap2	ATCEA4S10812	93							
155222	ATU017162	ATL8C48680:1781..1532	gap2	ATCEA4S13677	93							
155223	ATU017163	ATL8C48711:1046..1371	gap2	ATCEA4S29948	93							
155224	ATU017164	ATL8C2195:369..1	gap2	ATCEA4S163	93							
155225	ATU017165	ATL8C13202:1680..1100	gap2	ATCEA4S33015,ATCEA4S17231	93, 91							
155226	ATU017166	ATL8C15123:509..291	gap2	ATCEA4S29731	93							
155227	ATU017167	ATL8C28134:669..602	gap2	ATCEA4S2201	93							
155228	ATU017168	ATL8C28109:556..9	gap2	ATCEA4C76514_1	93							
155229	ATU017169	ATL8C11888:262..553	gap2	ATCEA4S825	93							
155230	ATU017170	ATL8C21890:676..954	gap2	ATCEA4C2345_2	93							
155231	ATU017171	ATL8C2809:167..1	gap2	ATCEA4S550	93							
155232	ATU017	ATL8C4	gap2	ATCEA4	93							

	172	9267:1 62..1		C28229 _1								
155233	ATU017 173	ATL8C3 3659:6 25..13 1	gap2	ATCEA4 S33542	93							
155234	ATU017 174	ATL8C6 869:79 ..485	gap2	ATCEA4 C5494_ 1	93							
155235	ATU017 175	ATL8C2 8032:1 ..263	gap2	ATCEA4 C10195 6_1	93							
155236	ATU017 176	ATL8C4 9321:1 090..1 475	gap2	ATCEA4 C10136 4_1	93							
155237	ATU017 177	ATL8C1 1885:1 ..114	gap2	ATCEA4 S32826	93							
155238	ATU017 178	ATL8C1 3061:6 54..10 59	gap2	ATCEA4 C55849 _1, ATCEA4 S33869	93, 90							
155239	ATU017 179	ATL8C9 385:93 2..146 9	gap2	ATCEA4 S3563, ATCEA4 S12248	93, 89							
155240	ATU017 180	ATL8C1 4929:1 83..1	gap2	ATCEA4 S36157	93							
155241	ATU017 181	ATL8C4 9354:7 42..11 60	gap2	ATCEA4 C185_1 0, ATCEA4 S31893 , ATCEA4 C185_4	93, 91, 88							
155242	ATU017 182	ATL8C4 9366:1 510..1 627	gap2	ATCEA4 S15665	93							
155243	ATU017	ATL8C4	gap2	ATCEA4	93							

	183	9423:145..1		C104016_1								
155244	ATU017184	ATL8C27807:1..780	gap2	ATCEA4C86305_1	93							
155245	ATU017185	ATL8C49646:1741..1901	gap2	ATCEA4S29992	93							
155246	ATU017186	ATL8C15554:2616..3273	gap2	ATCEA4S14833, ATCEA4C26439_1	93, 84							
155247	ATU017187	ATL8C14516:1..197	gap2	ATCEA4C37660_1, ATCEA4S12318	93, 89							
155248	ATU017188	ATL8S6712:55..336	gap2	ATCEA4S14505, ATCEA4S26590, ATCEA4S14504	93, 85, 83							
155249	ATU017189	ATL8C49829:242..1	gap2	ATCEA4S33607	93							
155250	ATU017190	ATL8C27748:3106..2774	gap2	ATCEA4C131837_1	93							
155251	ATU017191	ATL8C49921:64..1	gap2	ATCEA4S6284	93							
155252	ATU017192	ATL8C49943:1960..2241	gap2	ATCEA4S29704	93							
155253	ATU017193	ATL8C50113:6	gap2	ATCEA4S33137	93							

		91..121										
155254	ATU017194	ATL8C50213:3973..3819	gap2	ATCEA4S36162	93							
155255	ATU017195	ATL8S21931:87..1	gap2	ATCEA4S24428, ATCEA4S29362	93, 85							
155256	ATU017196	ATL8C5083:861..1100	gap2	ATCEA4C118465_1	93							
155257	ATU017197	ATL8C515:1554..1278	gap2	ATCEA4S27186	93							
155258	ATU017198	ATL8C5188:929..832	gap2	ATCEA4S18378	93							
155259	ATU017199	ATL8C5312:351..248	gap2	ATCEA4S27342	93							
155260	ATU017200	ATL8C27669:2249..1946	gap2	ATCEA4S1149	93							
155261	ATU017201	ATL8C27668:1..514	gap2	ATCEA4S811	93							
155262	ATU017202	ATL8C21465:696..1161	gap2	ATCEA4C126684_1	93							
155263	ATU017203	ATL8C12648:2918..3734	gap2	ATCEA4S7	92			g4886286	100	721	1.1e-58	(AL050300) putative protein [Arabidopsis

												thaliana]
155264	ATU017204	ATL8C33344:260..1	gap2	ATCEA4S126	93							
155265	ATU017205	ATL8C5508:4099..3447	gap2	ATCEA4C23390_2	93							
155266	ATU017206	ATL8C27647:3238..3438	gap2	ATCEA4S27277	93							
155267	ATU017207	ATL8C21388:930..612	gap2	ATCEA4S32154	93							
155268	ATU017208	ATL8C37347:1360..854	gap2	ATCEA4C64969_2, ATCEA4C64969_1	93, 83							
155269	ATU017209	ATL8C3327:2644..2457	gap2	ATCEA4S12216	93							
155270	ATU017210	ATL8C33260:143..516	gap2	ATCEA4S344	93							
155271	ATU017211	ATL8C27490:1037..1279	gap2	ATCEA4S27413	93							
155272	ATU017212	ATL8C2747:2518..2215	gap2	ATCEA4S30241	93							
155273	ATU017213	ATL8C5838:1095..1161	gap2	ATCEA4S3602	93							
155274	ATU017	ATL8C2	gap2	ATCEA4	93							

	214	7445:833..905		C572_1								
155275	ATU017215	ATL8C27430:583..789	gap2	ATCEA4C11617_1	93							
155276	ATU017216	ATL8C27427:1252..873	gap2	ATCEA4S26979	93							
155277	ATU017217	ATL8C33237:1101..1	gap2	ATCEA4C14578_1	93							
155278	ATU017218	ATL8C5978:1004..1196	gap2	ATCEA4S2404	93							
155279	ATU017219	ATL8C27410:1124..559	gap2	ATCEA4C3499_1	93							
155280	ATU017220	ATL8C611:196..571	gap2	ATCEA4S34890	93							
155281	ATU017221	ATL8C619:838..953	gap2	ATCEA4S12828	93							
155282	ATU017222	ATL8C5161:484..778	gap2	ATCEA4C61898_1	93							
155283	ATU017223	ATL8S16670:558..1	gap2	ATCEA4C22740_1	93							
155284	ATU017224	ATL8C20949:187..1	gap2	ATCEA4C23422_1	93							
155285	ATU017225	ATL8C639:1912..821	gap2	ATCEA4C30822_1	93							
155286	ATU017226	ATL8C32136:508..100	gap2	ATCEA4C68131_1, ATCEA4	93, 84							

				S11233								
155287	ATU017227	ATL8C6435:350..520	gap2	ATCEA4S26501	93							
155288	ATU017228	ATL8C6473:420..666	gap2	ATCEA4S30956	93							
155289	ATU017229	ATL8S20070:436..148	gap2	ATCEA4S15319, ATCEA4S14691, ATCEA4S29070, ATCEA4S14348, ATCEA4S23511, ATCEA4S8214	93, 91, 90, 89, 86, 84							
155290	ATU017230	ATL8C6795:355..610	gap2	ATCEA4S27240	93							
155291	ATU017231	ATL8C27349:940..837	gap2	ATCEA4C28113_1	93							
155292	ATU017232	ATL8C27345:1..366	gap2	ATCEA4S33123	93							
155293	ATU017233	ATL8C12201:448..1582	gap2	ATCEA4C7663_1, ATCEA4C17558_1	93, 92							
155294	ATU017234	ATL8C27309:232..163	gap2	ATCEA4S7852	93							

155295	ATU017235	ATL8C6936:540..1561	gap2	ATCEA4S25074	93							
155296	ATU017236	ATL8C890:502..434	gap2	ATCEA4C50915_1	93							
155297	ATU017237	ATL8C7019:715..421	gap2	ATCEA4S30010	93							
155298	ATU017238	ATL8C1238:82..685	gap2	ATCEA4C1769_1	93							
155299	ATU017239	ATL8C27241:19..345	gap2	ATCEA4C141143_1	93							
155300	ATU017240	ATL8C33296:2348..2595	gap2	ATCEA4C24247_1	93							
155301	ATU017241	ATL8C32066:3181..2913	gap2	ATCEA4S26769, ATCEA4S34457	93, 89							
155302	ATU017242	ATL8C7069:850..542	gap2	ATCEA4S26954	93							
155303	ATU017243	ATL8C22135:93..472	gap2	ATCEA4C787_6, ATCEA4S15846	93, 85							
155304	ATU017244	ATL8C34173:1087..1502	gap2	ATCEA4C26848_1	93							
155305	ATU017245	ATL8S10570:1..141	gap2	ATCEA4C302_1	93							
155306	ATU017246	ATL8C32973:433..856	gap2	ATCEA4S4212	93							

155307	ATU017247	ATL8C7242:235..493	gap2	ATCEA4S13635	93							
155308	ATU017248	ATL8S20078:276..474	gap2	ATCEA4C32634_1	93							
155309	ATU017249	ATL8C7464:1..468	gap2	ATCEA4C106933_1	93							
155310	ATU017250	ATL8C7465:1..272	gap2	ATCEA4S20397, ATCEA4S15217	93, 87							
155311	ATU017251	ATL8C37209:166..1	gap2	ATCEA4S3052, ATCEA4S2916	93, 88							
155312	ATU017252	ATL8S8187:105..1	gap2	ATCEA4C17829_1	93							
155313	ATU017253	ATL8C20759:655..511	gap2	ATCEA4S60	93							
155314	ATU017254	ATL8S16102:1..87	gap2	ATCEA4S14442, ATCEA4S25148	93, 92							
155315	ATU017255	ATL8C7771:1091..1436	gap2	ATCEA4S7	93							
155316	ATU017256	ATL8C7861:179..578	gap2	ATCEA4S30082	93							
155317	ATU017257	ATL8S14242:64..1	gap2	ATCEA4C57905_1	93							
155318	ATU017258	ATL8C32879:778..64	gap2	ATCEA4S12470	93							

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155319	ATU017259	ATL8C1867:1282..1073	gap2	ATCEA4C52058_1	93							
155320	ATU017260	ATL8C32849:1963..2074	gap2	ATCEA4S15343	93							
155321	ATU017261	ATL8C31977:571..1	gap2	ATCEA4S8034, ATCEA4C42391_1	93, 93							
155322	ATU017262	ATL8C8057:580..767	gap2	ATCEA4S6802	93							
155323	ATU017263	ATL8C8073:1..366	gap2	ATCEA4S6574	93							
155324	ATU017264	ATL8C20642:1843..1689	gap2	ATCEA4S26466	93							
155325	ATU017265	ATL8C8092:429..850	gap2	ATCEA4C85528_1	93							
155326	ATU017266	ATL8C8101:1..121	gap2	ATCEA4C3753_1	93							
155327	ATU017267	ATL8C24962:1843..1653	gap2	ATCEA4C485_1	93							
155328	ATU017268	ATL8S15893:449..543	gap2	ATCEA4C85595_1	93							
155329	ATU017269	ATL8C839:815..166	gap2	ATCEA4C2765_1	93							
155330	ATU017270	ATL8C32738:631..11	gap2	ATCEA4C403_1	93							

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155331	ATU0171271	ATL8C11745:1..975	gap2	ATCEA4S32824, ATCEA4S35921	93, 88							
155332	ATU0171272	ATL8C843:1..419	gap2	ATCEA4C101276_1	93							
155333	ATU0171273	ATL8S10365:1..262	gap2	ATCEA4C200671	93							
155334	ATU0171274	ATL8C11589:181..400	gap2	ATCEA4S14391, ATCEA4S27071	93, 85							
155335	ATU0171275	ATL8C12148:2098..2022	gap2	ATCEA4C679_3	93							
155336	ATU0171276	ATL8C8566:530..1	gap2	ATCEA4S4022, ATCEA4S12701	93, 91							
155337	ATU0171277	ATL8C9007:130..406	gap2	ATCEA4S6370	93							
155338	ATU0171278	ATL8C31866:2755..3156	gap2	ATCEA4S20263, ATCEA4S20700	93, 88							
155339	ATU0171279	ATL8C9091:1097..1525	gap2	ATCEA4S4367	93							
155340	ATU0171280	ATL8C22554:1..216	gap2	ATCEA4C42615_1	93							
155341	ATU0171281	ATL8C20533:1784..1561	gap2	ATCEA4C375_2	93							

155342	ATU0172 82	ATL8C917:842..1336	gap2	ATCEA4S5612	93							
155343	ATU0172 83	ATL8C20442:846..403	gap2	ATCEA4S4729	93							
155344	ATU0172 84	ATL8C936:133..249	gap2	ATCEA4S17207	93							
155345	ATU0172 85	ATL8C9408:139..1	gap2	ATCEA4C10682_1	93							
155346	ATU0172 86	ATL8C18404:947..1298	gap2	ATCEA4S13066, ATCEA4C21849_1, ATCEA4S10273	93, 87, 83							
155347	ATU0172 87	ATL8C32502:811..493	gap2	ATCEA4S27209	93							
155348	ATU0172 88	ATL8C9426:2265..2364	gap2	ATCEA4S30021	93							
155349	ATU0172 89	ATL8S10957:1..99	gap2	ATCEA4C7539_2	93							
155350	ATU0172 90	ATL8C9493:2352..1575	gap2	ATCEA4S1273	93							
155351	ATU0172 91	ATL8C9717:127..559	gap2	ATCEA4S3773	93							
155352	ATU0172 92	ATL8C9899:835..635	gap2	ATCEA4C24637_1	93							
155353	ATU0172 93	ATL8C8399:17	gap2	ATCEA4S24552	93, 89							

		60..863		, ATCEA4S35095								
155354	ATU017294	ATL8S10413:1..83	gap2	ATCEA4S5925	93							
155355	ATU017295	ATL8S10590:1..194	gap2	ATCEA4S34035	93							
155356	ATU017296	ATL8C35843:1395..883	gap2	ATCEA4C99759_1	93							
155357	ATU017297	ATL8S15346:320..40	gap2	ATCEA4C47856_1	93							
155358	ATU017298	ATL8S11409:670..445	gap2	ATCEA4C46912_1	93							
155359	ATU017299	ATL8C25869:304..172	gap2	ATCEA4C8476_1	93							
155360	ATU017300	ATL8C26664:817..1	gap2	ATCEA4C7079_1	93							
155361	ATU017301	ATL8C33958:626..709	gap2	ATCEA4S5386, ATCEA4S10925	93, 91							
155362	ATU017302	ATL8C10999:3516..2970	gap2	ATCEA4S35128, ATCEA4C21407_1	93, 93							
155363	ATU017303	ATL8S11144:116..1	gap2	ATCEA4S12773	93							
155364	ATU017304	ATL8S6316:490..185	gap2	ATCEA4C5713_1	93							
155365	ATU017	ATL8C1	gap2	ATCEA4	93							

	305	2461:862..1324		S35114								
155366	ATU017306	ATL8S11343:78..1	gap2	ATCEA4C30185_1	93							
155367	ATU017307	ATL8S11539:71..302	gap2	ATCEA4S5589	93							
155368	ATU017308	ATL8C1899:197..517	gap2	ATCEA4S1367	93							
155369	ATU017309	ATL8S11630:181..364	gap2	ATCEA4S36347	93							
155370	ATU017310	ATL8S7353:156..1	gap2	ATCEA4S36347	93							
155371	ATU017311	ATL8C1461:1..485	gap2	ATCEA4C29400_1	93							
155372	ATU017312	ATL8C2010:2558..2124	gap2	ATCEA4C151401_1	93							
155373	ATU017313	ATL8C35065:1885..1170	gap2	ATCEA4C43629_1, ATCEA4S12280	93, 85							
155374	ATU017314	ATL8C31576:2967..3042	gap2	ATCEA4C32179_1	93							
155375	ATU017315	ATL8C36947:1..281	gap2	ATCEA4S34608	93							
155376	ATU017316	ATL8S7573:1..585	gap2	ATCEA4S21284	93							
155377	ATU017317	ATL8C32219:1012..6	gap2	ATCEA4S29879	93							

		00										
155378	ATU0173 18	ATL8C18389:69..523	gap2	ATCEA4C28695_2, ATCEA4S17132	93, 84							
155379	ATU0173 19	ATL8C26951:1886..2378	gap2	ATCEA4S22241, ATCEA4S33669, ATCEA4S34106	93, 86, 82							
155380	ATU0173 20	ATL8C3697:1..266	gap2	ATCEA4S4405	93							
155381	ATU0173 21	ATL8S28062:677..396	gap2	ATCEA4C126683_1	93							
155382	ATU0173 22	ATL8C34122:664..1	gap2	ATCEA4C63784_1, ATCEA4S30987	93, 83							
155383	ATU0173 23	ATL8C2002:526..1	gap2	ATCEA4S34445	93							
155384	ATU0173 24	ATL8C3674:2033..2610	gap2	ATCEA4S31499, ATCEA4C377241	93, 82							
155385	ATU0173 25	ATL8C17265:153..1	gap2	ATCEA4C3118_1	93							
155386	ATU0173 26	ATL8C10857:22963..7541	gap2	ATCEA4S179, ATCEA4S11082	92, 88			g3047073, g4325348	100, 58	2389, 231	5.5e-238, 2.7e-16	(AF058825) contains similarity

												to retrotranspo son-like proteins [Arabidopsis thaliana]; (AF128394) contains similarity to phosphate transporters [Arabidopsis thaliana]
155387	ATU017327	ATL8C37136:1..115	gap2	ATCEA4C75270_1	93							
155388	ATU017328	ATL8C2648:818..1	gap2	ATCEA4S30898	93							
155389	ATU017329	ATL8C29128:1104..703	gap2	ATCEA4C10486_1, ATCEA4S14411	93, 86							
155390	ATU017330	ATL8C19947:680..755	gap2	ATCEA4S1715	93							
155391	ATU017331	ATL8C36727:670..1	gap2	ATCEA4C102806_1,	93, 82							

				ATCEA4S33691								
155392	ATU017332	ATL8C25541:1256..1124	gap2	ATCEA4S30417	93							
155393	ATU017333	ATL8C37243:2103..1982	gap2	ATCEA4S31858	93							
155394	ATU017334	ATL8C10807:2741..4409	gap2	ATCEA4S5256, ATCEA4C3658_1	92, 91			g3738335, g3445211	100, 99	837, 102	4.2e-91, 0.0032	(AC005170) unknown protein [Arabidopsis thaliana]; (AC004786) hypothetical protein [Arabidopsis thaliana]
155395	ATU017335	ATL8S12795:25..304	gap2	ATCEA4S12445	93							
155396	ATU017336	ATL8S14781:157..424	gap2	ATCEA4C9305_1, ATCEA4S4505	93, 89							
155397	ATU017337	ATL8S12944:1..501	gap2	ATCEA4C9913_1	93							
155398	ATU017338	ATL8S12953:1..219	gap2	ATCEA4S29321,	93, 87							

				ATCEA4S35993								
155399	ATU0173 39	ATL8S13022:1..435	gap2	ATCEA4S32552	93							
155400	ATU0173 40	ATL8C37280:38..270	gap2	ATCEA4S31877	93							
155401	ATU0173 41	ATL8S13060:407..83	gap2	ATCEA4S3195	93							
155402	ATU0173 42	ATL8C26420:28..470	gap2	ATCEA4C34883_1	93							
155403	ATU0173 43	ATL8S13123:254..614	gap2	ATCEA4S13132	93							
155404	ATU0173 44	ATL8C5631:849..1253	gap2	ATCEA4C17029_1	93							
155405	ATU0173 45	ATL8C25504:1613..292	gap2	ATCEA4C102735_1	93							
155406	ATU0173 46	ATL8C1681:2363..2899	gap2	ATCEA4S14537, ATCEA4C90593_1	93, 86							
155407	ATU0173 47	ATL8C13596:1112..485	gap2	ATCEA4C584_1	93							
155408	ATU0173 48	ATL8C7329:1..275	gap2	ATCEA4C103523_1, ATCEA4C107066_1	93, 82							
155409	ATU0173 49	ATL8C11507:5	gap2	ATCEA4C21022	93							

		51..153		_1								
155410	ATU017350	ATL8S15624:175..1	gap2	ATCEA4C40880_1	93							
155411	ATU017351	ATL8C40944:1..135	gap2	ATCEA4C7975_1	93							
155412	ATU017352	ATL8S7057:138..1	gap2	ATCEA4C14176_1	93							
155413	ATU017353	ATL8S22938:243..1	gap2	ATCEA4C75015_1, ATCEA4S31855	93, 90							
155414	ATU017354	ATL8C32033:285..180	gap2	ATCEA4S849	93							
155415	ATU017355	ATL8C15900:214..116	gap2	ATCEA4C40880_1, ATCEA4S24186	93, 87							
155416	ATU017356	ATL8S13599:475..804	gap2	ATCEA4S19263, ATCEA4S12355	93, 84							
155417	ATU017357	ATL8C37485:1..197	gap2	ATCEA4S4704	93							
155418	ATU017358	ATL8C5620:337..499	gap2	ATCEA4S6836, ATCEA4C17631_1	93, 92							
155419	ATU017359	ATL8S13954:111..321	gap2	ATCEA4S14005	93							
155420	ATU017360	ATL8C5518:23	gap2	ATCEA4C28442	93							

		42..2569		_1								
155421	ATU017361	ATL8C37497:1117..540	gap2	ATCEA4C23056_2	93							
155422	ATU017362	ATL8S14099:386..294	gap2	ATCEA4S3937	93							
155423	ATU017363	ATL8S14332:180..535	gap2	ATCEA4S625	93							
155424	ATU017364	ATL8C26232:925..590	gap2	ATCEA4S3610	93							
155425	ATU017365	ATL8C15269:673..251	gap2	ATCEA4C47044_1	93							
155426	ATU017366	ATL8C34328:61..1	gap2	ATCEA4C47044 1	93							
155427	ATU017367	ATL8S12729:631..292	gap2	ATCEA4C891_1	93							
155428	ATU017368	ATL8C18747:834..923	gap2	ATCEA4S14696	93							
155429	ATU017369	ATL8C19750:4054..3781	gap2	ATCEA4S478	93							
155430	ATU017370	ATL8C31996:636..712	gap2	ATCEA4S4800	93							
155431	ATU017371	ATL8S28684:1..490	gap2	ATCEA4S11378,	93, 89							

				ATCEA4C65333_1								
155432	ATU017372	ATL8S1522:1..282	gap2	ATCEA4S4886	93							
155433	ATU017373	ATL8C435:75..1	gap2	ATCEA4C74399_1	93							
155434	ATU017374	ATL8C31398:59..497	gap2	ATCEA4S31395	93							
155435	ATU017375	ATL8C37532:1..188	gap2	ATCEA4S10897	93							
155436	ATU017376	ATL8C10495:447..238	gap2	ATCEA4S13006	93							
155437	ATU017377	ATL8C26162:1759..1669	gap2	ATCEA4S32794	93							
155438	ATU017378	ATL8C13138:175..1	gap2	ATCEA4S14268	93							
155439	ATU017379	ATL8C24659:1370..1519	gap2	ATCEA4C4441_1	93							
155440	ATU017380	ATL8C25381:760..894	gap2	ATCEA4S27276	93							
155441	ATU017381	ATL8C1150:1678..1249	gap2	ATCEA4C42373_1	93							
155442	ATU017382	ATL8S16111:289..72	gap2	ATCEA4S34292	93							
155443	ATU017383	ATL8C31375:730..11	gap2	ATCEA4S27019,	93, 93							

		11		ATCEA4S35046								
155444	ATU017384	ATL8C25364:331..854	gap2	ATCEA4S24920	93							
155445	ATU017385	ATL8C35908:135..590	gap2	ATCEA4C81323_1	93							
155446	ATU017386	ATL8C30714:1..153	gap2	ATCEA4C69700_1	93							
155447	ATU017387	ATL8C11600:737..52	gap2	ATCEA4C32844_1	93							
155448	ATU017388	ATL8S16832:599..327	gap2	ATCEA4S34568	93							
155449	ATU017389	ATL8C4047:670..544	gap2	ATCEA4C71715_1	93							
155450	ATU017390	ATL8C21658:1829..1471	gap2	ATCEA4C147553_1	93							
155451	ATU017391	ATL8S6952:1..117	gap2	ATCEA4S29064	93							
155452	ATU017392	ATL8C25319:1361..1903	gap2	ATCEA4S32563	93							
155453	ATU017393	ATL8C10622:465..635	gap2	ATCEA4S1253	93							
155454	ATU017394	ATL8C35858:1267..957	gap2	ATCEA4S24766	93							
155455	ATU017395	ATL8S26856:1	gap2	ATCEA4C11645	93, 88							

		..496		_1, ATCEA4 S19859								
155456	ATU017 396	ATL8C1 9462:8 60..51 3	gap2	ATCEA4 S7	93							
155457	ATU017 397	ATL8S1 4193:1 ..220	gap2	ATCEA4 C5516_ 1, ATCEA4 S4666	93, 86							
155458	ATU017 398	ATL8C3 7955:1 870..1 508	gap2	ATCEA4 S192	93							
155459	ATU017 399	ATL8C3 8022:5 79..29 0	gap2	ATCEA4 S14222	93							
155460	ATU017 400	ATL8C3 1281:3 83..1	gap2	ATCEA4 S20162	93							
155461	ATU017 401	ATL8S1 7870:1 14..1	gap2	ATCEA4 S32621	93							
155462	ATU017 402	ATL8C2 5996:1 200..1 560	gap2	ATCEA4 S11456	93							
155463	ATU017 403	ATL8C1 8459:4 25..90 5	gap2	ATCEA4 C85423 _1	93							
155464	ATU017 404	ATL8S2 7696:1 ..186	gap2	ATCEA4 C59730 _1	93							
155465	ATU017 405	ATL8C1 937:79 5..485	gap2	ATCEA4 S34152	93							
155466	ATU017 406	ATL8C7 433:18 36..55 0	gap2	ATCEA4 C12628 8_1, ATCEA4	93, 89, 88							

				S27530, ATCEA4 S35707								
155467	ATU017407	ATL8C2709:2702..2333	gap2	ATCEA4C69018_1	93							
155468	ATU017408	ATL8S18199:523..1	gap2	ATCEA4C24788_1	93							
155469	ATU017409	ATL8C38087:706..1307	gap2	ATCEA4C134431_1	93							
155470	ATU017410	ATL8C25236:965..1263	gap2	ATCEA4S26381	93							
155471	ATU017411	ATL8C31203:380..825	gap2	ATCEA4S30796	93							
155472	ATU017412	ATL8S18682:390..2	gap2	ATCEA4S12745	93							
155473	ATU017413	ATL8C19344:108..271	gap2	ATCEA4C33724_1	93							
155474	ATU017414	ATL8S613:361..549	gap2	ATCEA4C31731_1	93							
155475	ATU017415	ATL8C24779:1882..2045	gap2	ATCEA4C120470_1	93							
155476	ATU017416	ATL8S19108:532..747	gap2	ATCEA4S13241	93							
155477	ATU017417	ATL8C38336:1851..1	gap2	ATCEA4S11486	93							

		766										
155478	ATU0174 18	ATL8C3 117:56 1..217	gap2	ATCEA4 S5328	93							
155479	ATU0174 19	ATL8C1 8399:3 60..1	gap2	ATCEA4 S3147	93							
155480	ATU0174 20	ATL8C2 8256:9 8..505	gap2	ATCEA4 C17081 _2, ATCEA4 S10678	93, 91							
155481	ATU0174 21	ATL8C3 1774:1 45..62 7	gap2	ATCEA4 S4836	93							
155482	ATU0174 22	ATL8C3 625:20 6..142	gap2	ATCEA4 S6047	93							
155483	ATU0174 23	ATL8C3 8276:1 80..1	gap2	ATCEA4 S30833	93							
155484	ATU0174 24	ATL8C3 6231:3 71..61 4	gap2	ATCEA4 S34039	93							
155485	ATU0174 25	ATL8C3 6279:5 14..90 7	gap2	ATCEA4 S11794	93							
155486	ATU0174 26	ATL8C1 9240:5 99..99 1	gap2	ATCEA4 S20332	93							
155487	ATU0174 27	ATL8C4 6358:1 145..1 418	gap2	ATCEA4 S32519 , ATCEA4 S18571	93, 82							
155488	ATU0174 28	ATL8C3 8417:1 ..164	gap2	ATCEA4 S13054	93							
155489	ATU0174 29	ATL8S5 17:1..	gap2	ATCEA4 C40131	93							

		114		1								
155490	ATU017430	ATL8C36279:1011..651	gap2	ATCEA4S3610	93							
155491	ATU017431	ATL8C36201:1..188	gap2	ATCEA4S30613	93							
155492	ATU017432	ATL8C36315:1..550	gap2	ATCEA4C8046_1, ATCEA4C8046_2	93, 91							
155493	ATU017433	ATL8C35786:71..142	gap2	ATCEA4S31745	93							
155494	ATU017434	ATL8C35774:1..231	gap2	ATCEA4S35314	93							
155495	ATU017435	ATL8C25221:1469..1542	gap2	ATCEA4C156646_1	93							
155496	ATU017436	ATL8C18336:1..295	gap2	ATCEA4S30581	93							
155497	ATU017437	ATL8C3644:756..1043	gap2	ATCEA4S11009	93							
155498	ATU017438	ATL8C31734:1..241	gap2	ATCEA4S12240	93							
155499	ATU017439	ATL8C36456:766..555	gap2	ATCEA4S31200	93							
155500	ATU017440	ATL8C38512:225..1	gap2	ATCEA4S11710	93							
155501	ATU017441	ATL8C12390:718..11	gap2	ATCEA4S1387	93							

		25										
155502	ATU017442	ATL8C36476:2..559	gap2	ATCEA4C117174_1	93							
155503	ATU017443	ATL8C20542:509..50	gap2	ATCEA4S25178	93							
155504	ATU017444	ATL8C36538:3427..3603	gap2	ATCEA4C1889_7	93							
155505	ATU017445	ATL8C36601:1335..1661	gap2	ATCEA4S30189	93							
155506	ATU017446	ATL8C19140:1258..1111	gap2	ATCEA4S25384	93							
155507	ATU017447	ATL8C36877:277..62	gap2	ATCEA4S35512,ATCEA4C272_1	93, 93							
155508	ATU017448	ATL8C3855:541..678	gap2	ATCEA4S3161	93							
155509	ATU017449	ATL8S27682:99..177	gap2	ATCEA4C37_1	93							
155510	ATU017450	ATL8S4739:1..106	gap2	ATCEA4C408_1	93							
155511	ATU017451	ATL8C38640:79..407	gap2	ATCEA4S10351	93							
155512	ATU017452	ATL8S27522:1..223	gap2	ATCEA4S25264,ATCEA4S24430,ATCEA4S16489	93,93,92,91,90,90,90,89,							

				, ATCEA4 S28270 , ATCEA4 S14677 , ATCEA4 S17018 , ATCEA4 S16296 , ATCEA4 S24017 , ATCEA4 S28947 , ATCEA4 S17025 , ATCEA4 S27846 , ATCEA4 S14752	89, 88, 88, 87							
155513	ATU017453	ATL8C38644:145..43	gap2	ATCEA4S7822	93							
155514	ATU017454	ATL8C11447:1799..1346	gap2	ATCEA4C118812_1	93							
155515	ATU017455	ATL8C1236:439..783	gap2	ATCEA4S7	93							
155516	ATU017456	ATL8C19062:1036..961	gap2	ATCEA4S35568	93							
155517	ATU017457	ATL8C38650:202..45	gap2	ATCEA4S25821	93							

		2										
155518	ATU017458	ATL8C36839:4029..4282	gap2	ATCEA4S8825	93							
155519	ATU017459	ATL8C41449:1503..1910	gap2	ATCEA4S36096, ATCEA4S25503	93, 85							
155520	ATU017460	ATL8C36871:1..162	gap2	ATCEA4C21671_1	93							
155521	ATU017461	ATL8C38742:1..448	gap2	ATCEA4S3378	93							
155522	ATU017462	ATL8C38762:495..1	gap2	ATCEA4C28334_1	93							
155523	ATU017463	ATL8C23793:815..1	gap2	ATCEA4C21764_1, ATCEA4C37660_1	92, 89	ATL8C23793:706..441	0.99	g134025	99	366	6.5e-33	CHLOROPLAST 30S RIBOSOMAL PROTEIN S8 [Nicotiana tabacum]
155524	ATU017464	ATL8C45050:90..863	gap2	ATCEA4C16391_1, ATCEA4S34130	92, 89	ATL8C45050:99..724	0.98	g2983147	99	109	3.4e-07	(AE000692) hypothetical protein [Aquifex aeolicus]
155525	ATU017465	ATL8C32096:1495..1	gap2	ATCEA4S33930, ATCEA4	92, 83	ATL8C32096:1140..641	0.89	g136636	99	642	5.4e-63	UBIQUITIN-CONJUGATING

				C270_1								ENZYME E2-17 KD 1 (UBIQUITIN-PROTEIN LIGASE 1) (UBIQUITIN CARRIER PROTEIN 1) [Arabidopsis thaliana]
155526	ATU017466	ATL8C11480:52..585	gap2	ATCEA4C1042_1	92	ATL8C11480:229..556	0.89	g4406772	99	484	7.9e-26	(AC006836) putative nitrilase-associated protein [Arabidopsis thaliana]
155527	ATU017467	ATL8C13149:1536..228	gap2	ATCEA4S33499	92	ATL8C13149:1147..380	0.85	g2791806	99	365	2.8e-33	(AF041433) bet3 [Mus musculus]
155528	ATU017468	ATL8C24842:915..267	gap2	ATCEA4S5416	92	ATL8C24842:915..267	0.84	g4850300	99	760	5.3e-76	(AL049876) putative disease

												resistance response protein [Arabidopsis thaliana]
155529	ATU017469	ATL8C27196:914..235	gap2	ATCEA4C140665_1	92	ATL8C27196:654..337	0.81	g4063752	99	511	1.8e-39	(AC005851) unknown protein [Arabidopsis thaliana]
155530	ATU017470	ATL8C20942:2564..3709	gap2	ATCEA4C5283_1, ATCEA4S555	92, 83	ATL8C20942:2869..3610	0.77	g3377820	99	507	2.1e-29	(AF076275) contains similarity to coatomer zeta chains [Arabidopsis thaliana]
155531	ATU017471	ATL8C11337:2667..403	gap2	ATCEA4S4538, ATCEA4C41467_1	92, 87	ATL8C11337:2275..751	0.76	g4586114	99	309	3.6e-16	(AL049638) putative protein [Arabidopsis thaliana]

155532	ATU017472	ATL8C22734:183..720	gap2	ATCEA4C133170_1	92	ATL8C22734:244..567	0.74	g3128181	99	443	4.2e-37	(AC004521) unknown protein [Arabidopsis thaliana]
155533	ATU017473	ATL8C10396:4033..1567	gap2	ATCEA4C23643_1, ATCEA4S10356, ATCEA4S2457	92, 89, 83	ATL8C10396:4033..1990	0.69	g1491712	99	164		(X99961) unknown [Homo sapiens]
155534	ATU017474	ATL8C40096:26..733	gap2	ATCEA4S25157, ATCEA4S33672, ATCEA4C542_1, ATCEA4C542_2, ATCEA4S25149, ATCEA4S6362	92, 91, 91, 88, 84, 82	ATL8C40096:672..608	0.69	g4586264	99	618	1.9e-53	(AL049640) blue copper-binding protein, 15K (lamin) [Arabidopsis thaliana]
155535	ATU017475	ATL8C47354:347..713	gap2	ATCEA4S33457	92	ATL8C47354:411..559	0.68	g1173351	99	295	0.012	DNA BINDING PROTEIN S1FA [Spinacia oleracea]
155536	ATU017	ATL8C3	gap2	ATCEA4	92,	ATL8C3	0.50	g26212	99	190	1.3e-	(AE000

	476	9628:478..2878		C17852_2, ATCEA4C17852_1, ATCEA4S27421	90, 88	9628:1258..2878		99			15	812) conserved protein [Methanobacterium thermoautotrophicum]
155537	ATU017477	ATL8C13651:2861..1131	gap2	ATCEA4S34591	92	ATL8C13651:2861..1131	0.50	g3695392, g3695388	99, 45	313, 114	2.0e-28, 2.6e-06	(AF096371) No definition line found [Arabidopsis thaliana]; (AF096371) No definition line found [Arabidopsis thaliana]
155538	ATU017478	ATL8C32757:1834..628	gap2	ATCEA4C119819_1	92	ATL8C32757:1674..628	0.41	g4582462	99	202	6.0e-10	(AC007071) hypothetical protein [Arabidopsis thaliana]
155539	ATU017	ATL8C1	gap2	ATCEA4	92			g19222	99	769	1.6e-	(Y1008

	479	1989:1301..639		S35610				42			33	4) hypothetical protein [Arabidopsis thaliana]
155540	ATU017480	ATL8C4202:1..633	gap2	ATCEA4S36018, ATCEA4C138309_1	92, 86			g4926829	99	262	9.3e-15	(AC004135) T17H7.14 [Arabidopsis thaliana]
155541	ATU017481	ATL8C10927:1820..958	gap2	ATCEA4S178	92			g4558675	99	399	1.8e-23	(AC006586) hypothetical protein [Arabidopsis thaliana]
155542	ATU017482	ATL8C22806:1781..62	gap2	ATCEA4C473_1	92	ATL8C22806:1738..688	0.42	g2582639	98	2007	7.7e-193	(AJ002414) hnRNP-like protein [Arabidopsis thaliana]
155543	ATU017483	ATL8C32586:2436..336	gap2	ATCEA4C21663_1	92	ATL8C32586:2328..392	0.46	g2832704	97	3255	0.0	(AL021713) initiation factor-2Bepsilon-

												like protein [Arabidopsis thaliana]
155544	ATU017484	ATL8C38127:2138..1	gap2	ATCEA4S12576	92	ATL8C38127:2138..60	0.92	g4539004	93	1762	6.7e-181	(AL049481) putative protein kinase [Arabidopsis thaliana]
155545	ATU017485	ATL8C14520:7197..1483	gap2	ATCEA4S27399	92	ATL8C14520:4046..1483, ATL8C14520:7197..4250	0.78, 0.57	g4773908	93	2823	1.1e-272	(AF147259) No definition line found [Arabidopsis thaliana]
155546	ATU017486	ATL8C16271:2978..4678	gap2	ATCEA4C12719_1	92	ATL8C16271:3069..4049, ATL8C16271:4521..4448	0.70, 0.90	g3549669	92	1256	2.7e-88	(AL031394) putative protein [Arabidopsis thaliana]
155547	ATU017487	ATL8C50239:1057..1938	gap2	ATCEA4S31222	92			g3877439	92	408	8.8e-38	(Z72510) similarity to yeast

												UTR3 protein (Swiss Prot accession number P21374); cDNA EST EMBL:D72822 comes from this gene; cDNA EST EMBL:D75763 comes from this gene; cDNA EST yk274e3.3 comes from this gene; cDNA EST yk274e3.5 c... []
155548	ATU017488	ATL8C9285:2317..654	gap2	ATCEA4C44_1	92			g2780348	92	2319	7.5e-205	(AB000094) inorganic phosph

												ate transporter [Arabidopsis thaliana]
155549	ATU017489	ATL8C44348:4353..839	gap2	ATCEA4S12828, ATCEA4S321	92, 92	ATL8C44348:4346..2168	0.90	g4557068	91	3191	0.0	(AC007045) putative pol polyprotein [Arabidopsis thaliana]
155550	ATU017490	ATL8C10981:687..6140	gap2	ATCEA4S8429	92	ATL8C10981:760..5383	0.40	g2213582	91	3544	8.2e-309	(AC000348) T7N9.2 [Arabidopsis thaliana]
155551	ATU017491	ATL8C18160:812..97	gap2	ATCEA4C50954_1, ATCEA4S7247, ATCEA4S36041	92, 91, 90			g4586034	91	976	1.6e-81	(AC007109) unknown protein [Arabidopsis thaliana]
155552	ATU017492	ATL8C49035:1..1402	gap2	ATCEA4S33323	92	ATL8C49035:148..1292	0.92	g4309738	90	872	1.1e-92	(AC006439) putative tubby protein [Arabidopsis thaliana]

155553	ATU017493	ATL8C9090:8196..2559	gap2	ATCEA4S12828, ATCEA4S321	92, 90	ATL8C9090:8147..3239	0.49	g4432802, g4567293	90, 83	3361, 683		(AC006437) putative pol polyprotein, 5' partial [Arabidopsis thaliana]; (AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
155554	ATU017494	ATL8C47907:1164..1	gap2	ATCEA4S31611	92	ATL8C47907:1164..14	0.99	g4589962	88	1213	2.6e-120	(AC007169) putative fructokinase [Arabidopsis thaliana]
155555	ATU017495	ATL8C5677:1351..1	gap2	ATCEA4C2008_2, ATCEA4C30526_1, ATCEA4S35434	92, 92, 91, 82	ATL8C5677:1168..40	0.93	g4038055	88	2111		(AC005897) putative cytochrome P450 [Arabi

				, ATCEA4 S36381								dopsis thaliana]
155556	ATU017 496	ATL8C1 8912:1 431..1	gap2	ATCEA4 C8873_ 1	92	ATL8C1 8912:8 83..46	0.89	g41051 90	88	282	1.5e-17	(AF044 127) peroxi somal short-chain alcoho l dehydr ogenas e [Homo sapien s]
155557	ATU017 497	ATL8C5 342:31 02..1	gap2	ATCEA4 S779, ATCEA4 S2762	92, 82	ATL8C5 342:31 02..23 7	0.76	g31932 93	88	1795	9.2e-180	(AF069 298) contai ns a short region of simila rity to anothe r Arabid opsis hypoth etical protei n F19K23 .8 (GB:AC 000375) [Arabi dopsis thalia na]
155558	ATU017	ATL8C7	gap2	ATCEA4	92	ATL8C7	0.53	g43357	88	1912	9.3e-	(AC006

	498	673:1..1209		C44644_1		673:76..1203		61			198	284) unknown protein [Arabidopsis thaliana]
155559	ATU017499	ATL8C8123:1343..453	gap2	ATCEA4C2131_1, ATCEA4S35592	92, 82			g2231702	88	499	7.4e-49	(U92086) clathrin assembly protein AP19 homolog [Arabidopsis thaliana]
155560	ATU017500	ATL8C12482:2673..23	gap2	ATCEA4C16320_1	92	ATL8C12482:1966..23	0.63	g4539359	86	242	1.4e-16	(AL049525) putative protein [Arabidopsis thaliana]
155561	ATU017501	ATL8C9559:2023..1	gap2	ATCEA4C22204_1, ATCEA4S34075, ATCEA4C22204_2	92, 92, 86	ATL8C9559:1976..651	0.90	g2911044	85	1191	1.8e-113	(AL021961) putative protein [Arabidopsis thaliana]
155562	ATU017502	ATL8C12205:2	gap2	ATCEA4S31143	92, 89	ATL8C12205:2	0.75	g4587679	85	879	1.6e-84	(AC007197)

		888..1268		, ATCEA4C118880_1		773..1387						unknown protein [Arabidopsis thaliana]
155563	ATU017503	ATL8C23385:3937..390	gap2	ATCEA4S178	92	ATL8C23385:3937..1476	0.47	g4773920	85	2702	3.2e-258	(AF147259) F10A2.17 gene product [Arabidopsis thaliana]
155564	ATU017504	ATL8C18825:1294..133	gap2	ATCEA4C5326_1	92			g2827524	85	272	1.3e-24	(AL021633) predicted protein [Arabidopsis thaliana]
155565	ATU017505	ATL8C26525:87..1874	gap2	ATCEA4C16885_1	92	ATL8C26525:248..1861	0.64	g629669	83	574	6.5e-58	hypothetical protein - tomato []
155566	ATU017506	ATL8C9607:1..777	gap2	ATCEA4C119040_1	92			g4406763	83	568	2.3e-56	(AC006836) unknown protein [Arabidopsis thaliana]

155567	ATU017507	ATL8C13480:2396..1	gap2	ATCEA4S1213	92	ATL8C13480:2322..515	0.83	g2961386	82	1331	9.4e-117	(AL022141) putative protein [Arabidopsis thaliana]
155568	ATU017508	ATL8C23748:4490..95	gap2	ATCEA4C1930_1	92	ATL8C23748:2379..95	0.81	g3377829, g2146739	82, 77	1454, 1595	4.5e-120, 1.4e-139	(AF075598) No definition line found [Arabidopsis thaliana]; hexokinase (EC 2.7.1.1) 1 - Arabidopsis thaliana [Arabidopsis thaliana]
155569	ATU017509	ATL8C40174:1..632	gap2	ATCEA4C11549_1	92			g3880434	82	594	2.7e-61	(Z66521) cDNA EST yk291d10.3 comes from this gene; cDNA

												EST yk291d 10.5 comes from this gene [Caenorhabditis elegans]
155570	ATU017 510	ATL8C9 546:1. .1515	gap2	ATCEA4 S3546	92	ATL8C9 546:39 1..149 1	0.97	g44903 39	81	261	2.3e-34	(AL035 656) putative protein [Arabidopsis thaliana]
155571	ATU017 511	ATL8C1 1416:6 32..1	gap2	ATCEA4 C43919 _1	92	ATL8C1 1416:4 17..74	0.53	g21294 73	81	409	1.8e-35	arabinogalactan-like protein - loblolly pine [Pinus taeda]
155572	ATU017 512	ATL8C3 4615:1 748..6 07	gap2	ATCEA4 C12312 8_1	92			g45876 01	81	1086	9.5e-117	(AC006 951) unknown protein [Arabidopsis thaliana]
155573	ATU017 513	ATL8C2 2916:1	gap2	ATCEA4 S13097	92	ATL8C2 2916:1	0.88	g34618 39	80	895	8.7e-76	(AC005 315)

		..2700				84..2614						putative receptor protein kinase [Arabidopsis thaliana]
155574	ATU017514	ATL8C36833:1534..1	gap2	ATCEA4C13517_2, ATCEA4S24711	92, 89	ATL8C36833:1479..152	0.75	g2102691	80	772	5.2e-59	(U64817) fructokinase [Lycopersicon esculentum]
155575	ATU017515	ATL8C43702:5155..1	gap2	ATCEA4S12828, ATCEA4S321	92, 90			g4432802, g3695396	80, 50	3136, 981		(AC006437) putative polpolyprotein, 5' partial [Arabidopsis thaliana]; (AF096372) contains similarity to Arabidopsis thaliana retrot

												ranspo son Athila (GB:X8 1801) [Arabi dopsis thalia na]
155576	ATU017 516	ATL8C3 8375:1 177..7 8	gap2	ATCEA4 C10413 _1	92	ATL8C3 8375:7 81..11 6	0.73	g45859 76	79	715	2.3e-78	(AC005 287) Unknow n protei n [Arabi dopsis thalia na]
155577	ATU017 517	ATL8C3 4443:7 38..34 9	gap2	ATCEA4 S35717 , ATCEA4 C1922_ 3, ATCEA4 S11821	92, 88, 83			g58596 0	79	187	1.7e-11	PROTEI N TRANSP ORT PROTEI N SEC61 BETA SUBUNI T [Arabi dopsis thalia na]
155578	ATU017 518	ATL8C1 1344:1 ..1919	gap2	ATCEA4 S31152	92			g31766 64, g38802 80	79, 34	218, 79	5.3e-23, 8.6e-11	(AC004 393) Contai ns simila rity to beta scruin gb|Z47 541 from

												Limulus polyphemus. ESTs gb|T04493 and gb|AA585955 come from this gene. [Arabidopsis thaliana]; (Z82059) Similarity to Drosophila ring canal protein (SW:Q04652); cDNA EST EMBL:D72435 comes from this gene; cDNA EST EMBL:D75315 comes from

												this gene [Caenorhabditis elegans]
155579	ATU017519	ATL8C5520:1263..4758	gap2	ATCEA4C149018_1	92	ATL8C5520:1263..4603	0.84	g2258469	78	1291	4.9e-106	(AF009179) replication protein A1 [Oryza sativa]
155580	ATU017520	ATL8C49362:1944..1079	gap2	ATCEA4S13807	92	ATL8C49362:1738..1079	0.74	g2127414	78	90	1.2e-07	hypothetical protein 2 - Corynebacterium glutamicum [Corynebacterium glutamicum]
155581	ATU017521	ATL8C9166:1514..1	gap2	ATCEA4S30563	92	ATL8C9166:1401..123	0.74	g3881508	78	170		(Z47357) cDNA EST EMBL:T00822 comes from this gene; cDNA EST EMBL:T00823 comes

												from this gene [Caenorhabditis elegans]
155582	ATU017522	ATL8C20845:5729..1117	gap2	ATCEA4C128762_1, ATCEA4S35153	92, 90	ATL8C20845:5630..1275	0.76	g4056482	76	4148	0.0	(AC005896) putative ABC transporter [Arabidopsis thaliana]
155583	ATU017523	ATL8S22713:545..121	gap2	ATCEA4C50505_1, ATCEA4S34496	92, 83			g2462834	76	532	1.8e-44	(AF000657) hypothetical protein [Arabidopsis thaliana]
155584	ATU017524	ATL8S20169:646..1	gap2	ATCEA4S31400	92	ATL8S20169:577..213	0.56	g3341694	75	450	1.3e-34	(AC003672) PREG-like protein [Arabidopsis thaliana]
155585	ATU017525	ATL8C21893:1262..93	gap2	ATCEA4S11865	92	ATL8C21893:1206..93	0.47	g2655008	75	596	4.1e-52	(AF017144) (1-4)-beta-mannan endohydrolas

												e [Lycopersicon esculentum]
155586	ATU017526	ATL8S3872:19..779	gap2	ATCEA4C32684_1	92	ATL8S3872:61..741	0.97	g4761588	73	287	2.6e-28	(AF129428) profilin [Malus domestica]
155587	ATU017527	ATL8C5477:1..1919	gap2	ATCEA4S9801	92	ATL8C5477:154..1919	0.92	g2498608	73	548	1.8e-63	L-ASPARTATE OXIDASE (QUINOLINATE SYNTHETASE B) [Pseudomonas aeruginosa]
155588	ATU017528	ATL8C27644:2468..55	gap2	ATCEA4S11476	92	ATL8C27644:2468..67	0.66	g4335729	72	511		(AC006248) putative salt-inducible protein [Arabidopsis thaliana]
155589	ATU017529	ATL8C31552:1..737	gap2	ATCEA4C6271_1, ATCEA4S30352	92, 82	ATL8C31552:95..737	0.88	g1076450	71	314	6.8e-16	hypothetical protein - rape

												[Brassica napus]
155590	ATU017530	ATL8C27888:6838..353	gap2	ATCEA4S12652, ATCEA4C151680_1, ATCEA4S33095	92, 85, 83	ATL8C27888:6826..353	0.66	g4468999	71	1616		(Z97342) unnamed protein product [Arabidopsis thaliana]"
155591	ATU017531	ATL8C43576:2667..307	gap2	ATCEA4S7501	92	ATL8C43576:2529..307	0.92	g3135669	70	369		(AF064084) prenylcysteine carboxylmethyltransferase [Homo sapiens]
155592	ATU017532	ATL8C14986:1127..1	gap2	ATCEA4C80566_1, ATCEA4S34523	92, 87	ATL8C14986:1055..44	0.88	g3334174	70	97	2.8e-05	GTP-BINDING PROTEIN ERA HOMOLOG [Streptococcus gordonii]
155593	ATU017533	ATL8C41108:616..1	gap2	ATCEA4S11387	92	ATL8C41108:616..278	0.72	g2062168	70	385	9.9e-39	(AC001645) hypothetical protei

												n [Arabidopsis thaliana]
155594	ATU017534	ATL8C36276:1181..121	gap2	ATCEA4S7380	92	ATL8C36276:945..137	0.76	g4263048	69	419	5.2e-39	(AC005142) putative hydrolase [Arabidopsis thaliana]
155595	ATU017535	ATL8C20592:3749..762	gap2	ATCEA4C122797_1	92	ATL8C20592:2657..762	0.90	g732207	68	487	2.6e-49	HYPOTHETICAL 75.4 KD PROTEIN IN AUT1-CSE2 INTERGENIC REGION [Saccharomyces cerevisiae]
155596	ATU017536	ATL8C42930:47..2370	gap2	ATCEA4S30046, ATCEA4S3180	92, 83	ATL8C42930:47..2314	0.50	g629561	68	1067	1.4e-98	SRG1 protein - Arabidopsis thaliana [Arabidopsis thaliana]
155597	ATU017537	ATL8C36243:1017..1	gap2	ATCEA4C4134_1	92			g4455287	68	548	1.4e-41	(AL035527) putati

												ve protein [Arabidopsis thaliana]
155598	ATU017538	ATL8C21196:837..9236	gap2	ATCEA4S13901	92	ATL8C21196:837..7625	0.57	g4309868	67	1504	1.1e-127	(AC006527) putative retrotransposon-like orf [Arabidopsis thaliana]
155599	ATU017539	ATL8C37100:1901..658	gap2	ATCEA4C51206_1	92	ATL8C37100:1878..801	0.94	g4454010	66	984		(AL035396) putative protein [Arabidopsis thaliana]
155600	ATU017540	ATL8C35453:1..705	gap2	ATCEA4C31460_1	92	ATL8C35453:119..695	0.91	g4103635	66	421	2.1e-45	(AF026538) ABA-responsive protein [Hordeum vulgare]
155601	ATU017541	ATL8C45168:1..1081	gap2	ATCEA4S3387	92	ATL8C45168:47..1081	0.83	g3420049	66	1061	2.0e-111	(AC004680) putative

												protein phosphatase 2C [Arabidopsis thaliana]
155602	ATU017542	ATL8C43272:2710..1813	gap2	ATCEA4C533_1	92	ATL8C43272:2639..1976	0.71	g1546694	66	986	1.5e-93	(X98806) peroxidase ATP20a [Arabidopsis thaliana]
155603	ATU017543	ATL8C43863:322..571	gap2	ATCEA4C35342_1	92			g3152585	66	128		(AC002986) Contains similarity to auxin-induced protein TM018A10.6 from A. thaliana BAC gb|AF013294. [Arabidopsis thaliana]
155604	ATU017544	ATL8C3206:4236..1	gap2	ATCEA4C8422_1,	92, 90, 89			g3335347, g37575	66, 59	1409, 1547	2.3e-139, 2.4e-	(AC004512) Contai

				ATCEA4C67123_1, ATCEA4S2383				16			151	ns similarity to ARI, RING finger protein gb|X98309 from Drosophila melanogaster. ESTs gb|T44383, gb|W43120, gb|N65868, gb|H36013, gb|AA042241, gb|T76869 and gb|AA042359 come from this gene. [Arabidopsis thaliana]; (AC005167) putative TMV

												resistance protein [Arabidopsis thaliana]
155605	ATU017545	ATL8C30683:1232..1	gap2	ATCEA4C59267_1	92	ATL8C30683:1024..574	0.88	g4680504	65	358	4.3e-35	(AF119222) hypothetical protein [Oryza sativa]
155606	ATU017546	ATL8C5896:1280..297	gap2	ATCEA4S34593, ATCEA4C116503_1, ATCEA4S32467	92, 91, 82	ATL8C5896:1083..433	0.83	g4454019	65	973		(AL035396) SRG1-like protein [Arabidopsis thaliana]
155607	ATU017547	ATL8C13087:2460..155	gap2	ATCEA4C2022_1	92	ATL8C13087:2441..300	0.78	g4455193	65	1895	2.1e-144	(AL035440) fimbrin-like protein (ATFIM1) [Arabidopsis thaliana]
155608	ATU017548	ATL8C24104:1449..59	gap2	ATCEA4C122887_1, ATCEA4S7440	92, 85			g4678363	65	517	4.3e-51	(AL049659) putative protein

												[Arabidopsis thaliana]
155609	ATU017549	ATL8C35179:1..573	gap2	ATCEA4C5776_2, ATCEA4C5776_1	92, 91	ATL8C35179:44..293	0.88	g3004556	64	325	6.0e-09	(AC003673) hypothetical protein [Arabidopsis thaliana]
155610	ATU017550	ATL8C11776:894..1	gap2	ATCEA4C119464_1	92	ATL8C11776:894..29	0.44	g4587535	64	990	1.0e-73	(AC006577) Belongs to the PF|00657 Lipase/Acylhydrolase with GDSL-motif family. EST gb|R29935 comes from this gene. [Arabidopsis thaliana]
155611	ATU017551	ATL8C30907:2374..3680	gap2	ATCEA4S36163, ATCEA4S35729	92, 87	ATL8C30907:2452..3493	0.99	g3193296	63	1561	7.1e-152	(AF069298) similar to pectin

												esterase [Arabidopsis thaliana]
155612	ATU017552	ATL8C46051:6124..2792	gap2.	ATCEA4C18132_1	92	ATL8C46051:6081..2792	0.83	g401013	63	924	3.1e-95	DNA-DIRECTED RNA POLYMERASE II 138 KD POLYPEPTIDE (RNA POLYMERASE II SUBUNIT 2) [Schizosaccharomyces pombe]
155613	ATU017553	ATL8C21818:1..1493	gap2	ATCEA4C117237_1, ATCEA4S30836	92, 86	ATL8C21818:490..1292	0.62	g2244796	63	1912	1.2e-179	(Z97336) hypothetical protein [Arabidopsis thaliana]
155614	ATU017554	ATL8C43273:289..1	gap2	ATCEA4S34314, ATCEA4S31492, ATCEA4C1268_2	92, 90, 88	ATL8C43273:230..27	0.56	g3702317	63	170	0.999	(AC005397) unknown protein [Arabidopsis thalia

												na]
155615	ATU017555	ATL8C8925:1981..3863	gap2	ATCEA4C6950_1	92	ATL8C8925:2432..3782	0.67	g2062157	62	1823	1.2e-121	(AC001645) jasmonate inducible protein isolog [Arabidopsis thaliana]
155616	ATU017556	ATL8C47103:1552..311	gap2	ATCEA4S35913	92			g3873913	62	85	2.3e-08	(Z71258) similar to Flavin-binding monooxygenase-like [Caenorhabditis elegans]
155617	ATU017557	ATL8C14403:5413..4109	gap2	ATCEA4S35790	92	ATL8C14403:5292..4179	0.87	g4914368	61	623	3.8e-70	(AC007584) hypothetical protein similar to T18A10.3 [Arabidopsis thaliana]
155618	ATU017	ATL8S3	gap2	ATCEA4	92	ATL8S3	0.84	g42181	61	180	3.1e-	(AL035

	558	0351:1..570		C70024_2		0351:103..463		16			17	353) putative protein [Arabidopsis thaliana]
155619	ATU017559	ATL8C37007:1208..97	gap2	ATCEA4S34424	92	ATL8C37007:1141..256	0.78	g4753653	61	247		(AL049751) putative protein [Arabidopsis thaliana]
155620	ATU017560	ATL8C14334:1..3782	gap2	ATCEA4S178, ATCEA4S344, ATCEA4S253	92, 91, 86	ATL8C14334:632..3782	0.76	g4263543, g4038066	61, 57	1227, 343	1.4e-123, 4.3e-42	(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabidopsis thaliana]
155621	ATU017561	ATL8C44879:2	gap2	ATCEA4S668	92	ATL8C44879:2	0.57	g4585885	61	2115	4.1e-196	(AC005850)

		015..1				015..152						Putative serine/threonine kinase [Arabidopsis thaliana]
155622	ATU017562	ATL8C12818:879..1	gap2	ATCEA4C4732_1	92	ATL8C12818:879..60	0.57	g3482932	61	466	1.3e-50	(AC003970) Hypothetical protein [Arabidopsis thaliana]
155623	ATU017563	ATL8C44393:266..837	gap2	ATCEA4C5536_1	92			g1946372	61	165	1.0e-09	(U93215) yeast hypothetical protein YDB1_SCHPO isolog [Arabidopsis thaliana]
155624	ATU017564	ATL8C24297:1..1525	gap2	ATCEA4S10788, ATCEA4S8311	92, 89	ATL8C24297:74..1342	0.97	g2384696	59	136	3.1e-13	(AF013216) acyl-CoA oxidase [Myxococcus xanthus]
155625	ATU017	ATL8C3	gap2	ATCEA4	92	ATL8C3	0.76	g33289	59	198	3.8e-	(AE001

	565	3662:930..1		S7941		3662:930..130		36			14	323) Lipoate Protein Ligase [Chlamydia trachomatis]
155626	ATU017566	ATL8C48663:808..2114	gap2	ATCEA4C49936_1	92	ATL8C48663:813..1642	0.65	g3075392	59	909	2.8e-98	(AC004484) putative steroid dehydrogenase [Arabidopsis thaliana]
155627	ATU017567	ATL8C46008:2135..183	gap2	ATCEA4C666_1	92	ATL8C46008:1970..273	0.80	g3334349	58	1860	4.8e-197	GLYCYL-TRNA SYNTHETASE (GLYCINE--TRNA LIGASE) (GLYRS) [Arabidopsis thaliana]
155628	ATU017568	ATL8C45547:1..677	gap2	ATCEA4C41300_1	92	ATL8C45547:86..677	0.62	g2828281	58	340	1.3e-40	(AL021687) hypothetical protein [Arabi

												dopsis thaliana]
155629	ATU017569	ATL8C50025:1369..1	gap2	ATCEA4C102536_1	92	ATL8C50025:1314..481	0.80	g4581112	57	139	5.2e-13	(AC005825) putative zinc finger protein [Arabidopsis thaliana]
155630	ATU017570	ATL8C15157:1..1329	gap2	ATCEA4S5148, ATCEA4S2188	92, 90	ATL8C15157:247..1247	0.72	g2281102	57	737	1.7e-69	(AC002333) SF16 isolog [Arabidopsis thaliana]
155631	ATU017571	ATL8C4097:3941..1	gap2	ATCEA4S28053, ATCEA4S33560	92, 86	ATL8C4097:3941..54	0.49	g4249410	57	293	1.4e-30	(AC006072) unknown protein [Arabidopsis thaliana]
155632	ATU017572	ATL8S10842:472..1	gap2	ATCEA4S13840	92	ATL8S10842:322..59	0.41	g2264373	57	611	1.5e-49	(AC002354) putative NAM/no apical meristem protein [Arabidopsis

												thaliana]
155633	ATU017573	ATL8C385:1261..1	gap2	ATCEA4C40198_1, ATCEA4S621	92, 82			g3510249	57	1481	4.0e-153	(AC005310) unknown protein [Arabidopsis thaliana]
155634	ATU017574	ATL8C49605:4615..279	gap2	ATCEA4S34973, ATCEA4C5469_1, ATCEA4S13021	92, 89, 84	ATL8C49605:4564..279	0.91	g3152587	56	4056	0.0	(AC002986) .Similar to CREB-binding protein homolog gb|U88570 from D. melanogaster and contains similarity to callus-associated protein gb|U01961 from Nicoti

												ana tabacum. EST gb|W43427 comes from this gene. [Arabidopsis thaliana]
155635	ATU017575	ATL8C19241:1..2424	gap2	ATCEA4S32375, ATCEA4S3045	92, 83	ATL8C19241:53..2409	0.72	g2245047	56	2314	5.2e-215	(Z97342) resistance gene [Arabidopsis thaliana]
155636	ATU017576	ATL8C6211:37..1024	gap2	ATCEA4S379	92	ATL8C6211:69..988	0.57	g3258573	56	242	1.5e-23	(U89959) Hypothetical protein [Arabidopsis thaliana]
155637	ATU017577	ATL8C48601:1548..1	gap2	ATCEA4S35204	92	ATL8C48601:1463..166	0.45	g3004548	56	955	4.1e-96	(AC003673) unknown protein [Arabidopsis thaliana]
155638	ATU017578	ATL8C615:430	gap2	ATCEA4S12828	92, 90	ATL8C615:417	0.43	g4432802	56	2179	1.4e-226	(AC006437)

		1..400		, ATCEA4 S321		1..959						putative polpolyprotein, 5' partial [Arabidopsis thaliana]
155639	ATU017579	ATL8C10280:182..942	gap2	ATCEA4 S7555	92	ATL8C10280:182..894	0.45	g3355617	55	226		(AJ000229) unnamed protein product [Hordeum vulgare]
155640	ATU017580	ATL8C17965:1297..1598	gap2	ATCEA4 C4414_1	92			g4335723	55	314		(AC006248) putative thioredoxin M [Arabidopsis thaliana]
155641	ATU017581	ATL8C19368:1..589	gap2	ATCEA4 C25540_1, ATCEA4 S14597	92, 82			g4926829	55	277	7.9e-27	(AC004135) T17H7.14 [Arabidopsis thaliana]
155642	ATU017582	ATL8C25128:5334..1	gap2	ATCEA4 S3424	92	ATL8C25128:2832..1	0.92, 0.86	g2244859, g45386	54, 51	255, 311	3.0e-23, 4.1e-	(Z97337) hypoth

						47, ATL8C25128:5334..3592		24			39	etical protein [Arabidopsis thaliana]; (AJ133502) hypothetical protein [Nicotiana tabacum]
155643	ATU017583	ATL8C566:1505..148	gap2	ATCEA4C72646_2, ATCEA4C72646_1	92, 91	ATL8C566:1505..210	0.66	g4263706	54	333	2.9e-27	(AC006223) hypothetical protein [Arabidopsis thaliana]
155644	ATU017584	ATL8C37312:489..1	gap2	ATCEA4S27237, ATCEA4C74414_1	92, 91	ATL8C37312:457..333	0.46	g3204125	54	156		(AJ006766) putative Pi starvation-induced protein [Cicer arietinum]
155645	ATU017585	ATL8C26985:750..1	gap2	ATCEA4C101775_1, ATCEA4S3438	92, 85			g2257527	54	284	1.7e-14	(AB004537) HLJ1 PROTEIN

												[Schizosaccharomyces pombe]
155646	ATU017586	ATL8C36860:220..600	gap2	ATCEA4C1190_1, ATCEA4S27522	92, 92	ATL8C36860:246..559	0.98	g1710424	53	464	1.3e-36	50S RIBOSOMAL PROTEIN L21, CHLOROPLAST PRECURSOR (CL21) [Arabidopsis thaliana]
155647	ATU017587	ATL8C16423:1..868	gap2	ATCEA4S32017	92	ATL8C16423:70..845	0.82	g2244752	53	554	2.5e-40	(Z97335) hypothetical protein [Arabidopsis thaliana]
155648	ATU017588	ATL8C6202:1..1797	gap2	ATCEA4S33372, ATCEA4S29087, ATCEA4S31024	92, 90, 85	ATL8C6202:80..1543	0.76	g1531758	53	1154	6.8e-113	(X98772) AUX1 [Arabidopsis thaliana]
155649	ATU017589	ATL8C37458:1383..1	gap2	ATCEA4S31711	92	ATL8C37458:1383..1219	0.73	g3157950	53	1075		(AC002131) Contains similarity to hypoth

												etical protein C18b11.05 gb|Z50728 from S. pombe. EST gb|H76601 comes from this gene. [Arabidopsis thaliana]
155650	ATU017590	ATL8C42792:1..397	gap2	ATCEA4S25065, ATCEA4S34564	92, 86	ATL8C42792:114..397	0.79	g2245093	52	602	1.1e-47	(Z97343) membrane channel protein [Arabidopsis thaliana]
155651	ATU017591	ATL8C27391:1612..201	gap2	ATCEA4C56968_1	92	ATL8C27391:1451..201	0.63	g2832649	52	1064		(AL021710) adenylosuccinate lyase - like protein [Arabidopsis thalia

												na]
155652	ATU017592	ATL8C38851:2436..1450	gap2	ATCEA4S33633, ATCEA4S28807	92, 88			g3861199	52	215	1.3e-14	(AJ235272) 50S RIBOSOMAL PROTEIN L3 (rplC) [Rickettsia prowazekii]
155653	ATU017593	ATL8C39985:377..896	gap2	ATCEA4C879_1	92			g2832363	51	194	3.3e-18	(Y14075) HMG protein [Arabidopsis thaliana]
155654	ATU017594	ATL8C21248:2644..4080	gap2	ATCEA4C341_3	92			g1946363	51	378	2.8e-09	(U93215) glycine-rich protein isolog [Arabidopsis thaliana]
155655	ATU017595	ATL8C4162:1..1056	gap2	ATCEA4S32071	92	ATL8C4162:386..1056	0.93	g3068714	50	727	1.2e-62	(AF049236) unknown [Arabidopsis thaliana]
155656	ATU017596	ATL8C35799:1592..1	gap2	ATCEA4C41941_1	92	ATL8C35799:1505..824	0.77	g3024762	50	77	0.19	TRNA PSEUDOURIDINE

												SYNTHASE B (TRNA PSEUDOURIDINE 55 SYNTHASE) (PSI55 SYNTHASE) (PSEUDOURIDYLATE SYNTHASE) (URACIL HYDROLYASE) [Mycobacterium tuberculosis]
155657	ATU017597	ATL8C45340:1208..1	gap2	ATCEA4C51288_1, ATCEA4S6710	92, 83	ATL8C45340:1077..70	0.49	g3482972	50	262	2.5e-19	(AL031369) putative protein [Arabidopsis thaliana]
155658	ATU017598	ATL8C30604:1593..797	gap2	ATCEA4C52728_1	92	ATL8C30604:1590..797	0.47	g1729980	50	550	4.3e-56	THAUMATIN-LIKE PROTEIN PRECURSOR [Arabidopsis

												thaliana]
155659	ATU017599	ATL8C15212:1..886	gap2	ATCEA4C23104_1	92			g3319373	50	513	3.2e-49	(AF077409) No definition line found [Arabidopsis thaliana]
155660	ATU017600	ATL8C21286:2953..1893	gap2	ATCEA4C48854_1, ATCEA4C55467_1	92, 82			g4559354	50	1461	1.3e-13	(AC006585) unknown protein [Arabidopsis thaliana]
155661	ATU017601	ATL8C5855:4181..684	gap2	ATCEA4C141052_1	92	ATL8C5855:4181..1412	0.92	g3878692	49	81		(Z49911) similar to esterase; cDNA EST EMBL:D69573 comes from this gene; cDNA EST EMBL:D65954 comes from this gene;

												cDNA EST yk370b 6.3 comes from this gene; cDNA EST yk370b 6.5 comes from this gene [Caenorhabditis elegans]
155662	ATU017602	ATL8C6875:3219..4040	gap2	ATCEA4C6085_1	92	ATL8C6875:3270..3723	0.86	g2262111	49	532	2.3e-29	(AC002343) ribitol dehydrogenase isolog [Arabidopsis thaliana]
155663	ATU017603	ATL8C15316:2856..1387	gap2	ATCEA4C73870_1	92	ATL8C15316:2748..1522	0.83	g2832625	49	953	4.4e-90	(AL021711) putative protein [Arabidopsis thaliana]
155664	ATU017604	ATL8C42977:5	gap2	ATCEA4S321	92	ATL8C42977:5	0.62	g3377816	49	1761	7.2e-165	(AF076275)

		01..4278				01..4242						contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
155665	ATU017605	ATL8C19704:507..1	gap2	ATCEA4S6211	92			g4895225	49	264	1.4e-14	(AC007660) putative response regulator protein [Arabidopsis thaliana]
155666	ATU017606	ATL8C11958:593..26	gap2	ATCEA4S10787	92			g3668079	49	248	1.8e-14	(AC004667) hypothetical protein [Arabidopsis thaliana]
155667	ATU017607	ATL8C49944:1	gap2	ATCEA4C35107	92, 92	ATL8C49944:5	0.80	g4726118	48	613	3.4e-64	(AC006436)

		450..1		_1, ATCEA4 C28461 _1		89..60						putative somatic embryogenesis receptor-like kinase [Arabidopsis thaliana]
155668	ATU017608	ATL8C3 1373:1 ..588	gap2	ATCEA4 C1994_ 1	92	ATL8C3 1373:2 18..28 0	0.75	g13544 66	48	346	1.8e-34	(U5291 0) U1 snRNP 70K truncated protein [Arabidopsis thaliana]
155669	ATU017609	ATL8C2 6141:1 ..1469	gap2	ATCEA4 S32949 , ATCEA4 S31375	92, 88	ATL8C2 6141:4 41..12 64	0.55	g40493 99	48	782	7.3e-89	(Y0958 1) FRO2 [Arabidopsis thaliana]
155670	ATU017610	ATL8S9 399:1. .555	gap2	ATCEA4 C538_1	92			g14031 34	48	645	3.2e-66	(X9845 3) peroxidase [Arabidopsis thaliana]
155671	ATU017611	ATL8C4 5449:1 ..993	gap2	ATCEA4 S8995	92	ATL8C4 5449:1 33..99	0.97	g30333 79	47	327	1.5e-22	(AC004 238) putati

						3						ve DNA-binding protein [Arabidopsis thaliana]
155672	ATU017612	ATL8C24060:1333..97	gap2	ATCEA4C29896_1	92	ATL8C24060:1271..97	0.94	g4602	47	174	5.0e-11	(X15953) transaldolase (AA 1-335) [Saccharomyces cerevisiae]
155673	ATU017613	ATL8C21572:1155..4239	gap2	ATCEA4S32557	92			g4185131	47	386	2.0e-39	(AC005724) putative zinc finger protein [Arabidopsis thaliana]
155674	ATU017614	ATL8C37985:1..1268	gap2	ATCEA4S29285	92	ATL8C37985:409..1086	0.71	g4193320	46	838	1.2e-74	(AF045473) histone deacetylase [Zea mays]
155675	ATU017615	ATL8C35129:1228..1	gap2	ATCEA4C83_5, ATCEA4C83_3,	92, 89, 84	ATL8C35129:1214..224	0.91	g119350	45	819	2.6e-92	ENOLASE (2-PHOSPHOGLYCE

				ATCEA4 S33688								RATE DEHYDR ATASE) (2-PHOSPH O-D-GLYCER ATE HYDRO-LYASE) [Arabi dopsis thalia na]
155676	ATU017 616	ATL8S9 215:44 9..1	gap2	ATCEA4 C29965 _1	92	ATL8S9 215:34 0..23	0.90	g29822 75	45	161	4.7e-19	(AF051 222) ATAF1-like protei n [Picea marian a]
155677	ATU017 617	ATL8C5 21:206 7..339 6	gap2	ATCEA4 S12974	92	ATL8C5 21:206 7..319 5	0.90	g24629 31	45	1176	5.0e-85	(Z8383 3) UDP-glucos e:ster ol glucos yltran sferas e [Arabi dopsis thalia na]
155678	ATU017 618	ATL8C3 456:56 6..1	gap2	ATCEA4 S35407	92	ATL8C3 456:47 7..37	0.65	g17913 52	45	331	5.5e-29	(U8378 9) O-diphen ol-O-methyl transf erase [Capsi

												cum annuum]
155679	ATU017619	ATL8S23914:392..1	gap2	ATCEA4S3890	92			g2944088	45	108	9.1e-11	(AF050102) glutathione s-transferase [Oryza sativa]
155680	ATU017620	ATL8S28442:309..1	gap2	ATCEA4C21477_2, ATCEA4C21477_1, ATCEA4C21477_4	92, 90, 89			g4544428	45	222	5.6e-21	(AC006955) unknown protein [Arabidopsis thaliana]
155681	ATU017621	ATL8C24627:10510..11752	gap2	ATCEA4C19922_1	92			g1800223	45	139	0.00017	(U65018) mannosyltransferase [Dictyostelium discoideum]
155682	ATU017622	ATL8C28794:85..1012	gap2	ATCEA4C16584_1	92	ATL8C28794:624..782	0.61	g4584358	44	321	1.6e-33	(AC006420) unknown protein [Arabidopsis thaliana]

155683	ATU017623	ATL8C19218:1..1255	gap2	ATCEA4S26977	92	ATL8C19218:77..1255	0.40	g62966 9, g27393 73	44, 42	435, 390	1.1e-38, 3.4e-35	hypothetical protein - tomato []; (AC002505) putative flavonol 3-o-glucosyltransferase [Arabidopsis thaliana]
155684	ATU017624	ATL8C17006:1..2886	gap2	ATCEA4S10434	92	ATL8C17006:54..2886	0.79	g22448 81	43	2260	9.1e-193	(Z9733 8) PDR5-like ABC transporter [Arabidopsis thaliana]
155685	ATU017625	ATL8S19061:1..543	gap2	ATCEA4S19321, ATCEA4C28902_1	92, 88	ATL8S19061:78..416	0.75	g28276 66	43	487	3.1e-50	(AL021637) hypothetical protein [Arabidopsis thaliana]
155686	ATU017626	ATL8C8943:1..2608	gap2	ATCEA4C14093_1,	92, 86	ATL8C8943:304..260	0.71	g19316 52	43	1399	5.5e-108	(U9597 3) phosph

				ATCEA4C121224_1		2						atidylinositol-4-phosphate 5-kinase isolog [Arabidopsis thaliana]
155687	ATU017627	ATL8C8865:2320..1	gap2	ATCEA4S126	92	ATL8C8865:1820..975	0.44	g3377816	43	392	1.1e-42	(AF076275) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
155688	ATU017628	ATL8C26377:1..649	gap2	ATCEA4S6741	92			g4544464	43	179	1.2e-17	(AC006580) putative chloroplast nucleoid DNA binding protein [Arabi

												dopsis thaliana]
155689	ATU017629	ATL8C32739:1882..648	gap2	ATCEA4C1644_1	92	ATL8C32739:1638..884	0.75	g3132891	42	955	5.9e-101	(AF034573) endo-1,4-beta glucanase; ATCEL2 [Arabidopsis thaliana]
155690	ATU017630	ATL8C500:1072..1	gap2	ATCEA4C4553_1, ATCEA4S28492	92, 84			g584797	42	400	6.5e-21	ATP SYNTHASE BETA CHAIN, MITOCHONDRIAL PRECURSOR [Daucus carota]
155691	ATU017631	ATL8C38286:1069..1	gap2	ATCEA4C492_1	92	ATL8C38286:1029..138	0.89	g3123329	41	634	8.3e-67	(AJ005929) squalene epoxidase homologue [Arabidopsis thaliana]
155692	ATU017632	ATL8C38078:1..2250	gap2	ATCEA4C8752_1	92	ATL8C38078:199..1696	0.61	g3006145	41	403	1.6e-32	(AL022299) ABC transp

												orter [Schizosaccharomyces pombe]
155693	ATU017633	ATL8C24054:1606..931	gap2	ATCEA4S3995	92	ATL8C24054:1524..931	0.52	g4490304	41	1140	2.6e-108	(AL035678) putative protein [Arabidopsis thaliana]
155694	ATU017634	ATL8C45866:1..1126	gap2	ATCEA4C16995_1	92	ATL8C45866:132..897	0.78	g4586101	40	410	1.4e-36	(AL049638) putative protein [Arabidopsis thaliana]
155695	ATU017635	ATL8C9048:1..841	gap2	ATCEA4C13755_2, ATCEA4S27210	92, 87			g3510256	40	179		(AC005310) unknown protein [Arabidopsis thaliana]
155696	ATU017636	ATL8S10054:442..1	gap2	ATCEA4C1909_1	92			g1173103	40	413	1.3e-41	RIBONUCLEASE 1 PRECURSOR [Arabidopsis thaliana]

155697	ATU017637	ATL8C45587:1..2389	gap2	ATCEA4C3991_1	92	ATL8C45587:87..2389	0.95	g4204265	39	537	3.1e-27	(AC005223) 45643 [Arabidopsis thaliana]
155698	ATU017638	ATL8C46303:1..964	gap2	ATCEA4S32487, ATCEA4S28148	92, 88	ATL8C46303:34..964	0.87	g3738328	39	541	1.4e-49	(AC005170) putative serine carboxypeptidase [Arabidopsis thaliana]
155699	ATU017639	ATL8C24901:858..1	gap2	ATCEA4C96948_1	92	ATL8C24901:759..42	0.87	g4559353	39	739	1.0e-61	(AC006585) putative extragenic suppressor protein [Arabidopsis thaliana]
155700	ATU017640	ATL8C38822:1264..647	gap2	ATCEA4C70221_1	92	ATL8C38822:1210..647	0.83	g3249105	39	704	2.5e-66	(AC003114) Contains similarity to protein phosphatase 2C

												(ABI1) gb|X78886 from A. thaliana. [Arabidopsis thaliana]
155701	ATU017641	ATL8C21670:853..1	gap2	ATCEA4S12898	92	ATL8C21670:838..116	0.78	g13455 02, g41153 62	39, 31	225, 768	4.9e-14, 4.4e-65	(X57297) TNP2 [Antirrhinum majus]; (AC005957) hypothetical protein [Arabidopsis thaliana]
155702	ATU017642	ATL8C30968:1578..1	gap2	ATCEA4C21187_1	92	ATL8C30968:1578..393	0.62	g28276 51	39	451	1.0e-43	(AL021637) putative protein [Arabidopsis thaliana]
155703	ATU017643	ATL8C28924:366..988	gap2	ATCEA4C156959_1	92	ATL8C28924:790..953	0.41	g23927 72	39	491	1.7e-45	(AC002534) putative chloroplast prephe

												nate dehydratase [Arabidopsis thaliana]
155704	ATU017644	ATL8C40242:1127..1	gap2	ATCEA4S126	92			g4115354	39	811	1.5e-78	(AC005957) putative En/Spm transposon protein [Arabidopsis thaliana]
155705	ATU017645	ATL8S27503:1..314	gap2	ATCEA4C98723_1	92			g1871180	39	341	1.3e-18	(U90439) unknown protein [Arabidopsis thaliana]
155706	ATU017646	ATL8S23177:1..413	gap2	ATCEA4S35936	92			g4508076	39	611	2.5e-48	(AC005882) 55659 [Arabidopsis thaliana]
155707	ATU017647	ATL8C2945:1..990	gap2	ATCEA4C135136_1	92	ATL8C2945:389..939	0.85	g3202044	38	178	3.9e-13	(AF069492) SONA [Emericella nidulans]

155708	ATU017648	ATL8C40029:711..444	gap2	ATCEA4S4290	92	ATL8C40029:625..539	0.69	g4538979	38	383	2.1e-36	(AL049487) putative protein [Arabidopsis thaliana]
155709	ATU017649	ATL8C7456:1087..1531	gap2	ATCEA4S35702	92			g2854158	38	137	3.9e-12	(AF045641) No definition line found [Caenorhabditis elegans]
155710	ATU017650	ATL8C4349:1021..62	gap2	ATCEA4S33730	92			g4689108	38	206	1.6e-06	(AF077030) hypothetical 43.2 kDa protein [Homo sapiens]
155711	ATU017651	ATL8C44482:706..1	gap2	ATCEA4C2977_1	92	ATL8C44482:597..117	0.93	g4559335	37	1029	9.8e-79	(AC007087) putative seed maturation protein [Arabidopsis thalia

												na]
155712	ATU017652	ATL8C45726:1125..224	gap2	ATCEA4S15573, ATCEA4S26130	92, 90	ATL8C45726:1020..554	0.80	g3549672	37	659	1.1e-61	(AL031394) putative protein [Arabidopsis thaliana]
155713	ATU017653	ATL8C9432:1259..1	gap2	ATCEA4S11450	92	ATL8C9432:1120..61	0.47	g4455313	37	762	5.1e-53	(AL035528) fatty acid elongase-like protein (cer2-like) [Arabidopsis thaliana]
155714	ATU017654	ATL8S15208:676..256	gap2	ATCEA4C20392_1	92			g541858	37	296	3.7e-20	endoxyloglucan transferase - Arabidopsis thaliana [Arabidopsis thaliana]
155715	ATU017655	ATL8C1103:1361..2646	gap2	ATCEA4S27393	92			g4388719	37	576	1.6e-21	(AC006413) putative myosin

												-like protein [Arabidopsis thaliana]
155716	ATU017656	ATL8C20168:104..782	gap2	ATCEA4S26390	92	ATL8C20168:104..381	0.99	g3643600	36	507		(AC005395) hypothetical protein [Arabidopsis thaliana]
155717	ATU017657	ATL8C13715:158..2347	gap2	ATCEA4S27744, ATCEA4S31115	92, 88	ATL8C13715:192..2163	0.84	g2494266	36	508	8.9e-34	GTP-BINDING PROTEIN LEPA [Synechocystis sp.]
155718	ATU017658	ATL8C35353:995..133	gap2	ATCEA4S32912	92	ATL8C35353:815..387	0.56	g4586112	36	736	5.6e-47	(AL049638) putative protein [Arabidopsis thaliana]
155719	ATU017659	ATL8S27362:1..604	gap2	ATCEA4C152232_1	92	ATL8S27362:77..522	0.49	g2129755	36	330	1.8e-21	tryptophan synthase (EC 4.2.1.20) alpha chain -

												Arabidopsis thaliana [Arabidopsis thaliana]
155720	ATU017660	ATL8C3268:1305..1	gap2	ATCEA4S5920	92			g2262162	36	296	4.2e-39	(AC002329) hypothetical protein similar to A. thaliana protein F19K23.19 [Arabidopsis thaliana]
155721	ATU017661	ATL8C17175:459..1230	gap2	ATCEA4S4553	92			g2497539	36	530	9.6e-48	PYRUVATE KINASE, CHLOROPLAST ISOZYME A PRECURSOR [Ricinus communis]
155722	ATU017662	ATL8C28554:547..3561	gap2	ATCEA4S3087	92	ATL8C28554:1539..600,	0.90, 0.70	g2864620	35	228	1.2e-19	(AL021811) hypothetical

						ATL8C28554:2072..3561						protein [Arabidopsis thaliana]
155723	ATU017663	ATL8C5940:1..1344	gap2	ATCEA4S32399, ATCEA4S27658	92, 82	ATL8C5940:166..926	0.81	g4335751	35	919		(AC006284) putative methyltransferase [Arabidopsis thaliana]
155724	ATU017664	ATL8C2514:1..674	gap2	ATCEA4S34559	92	ATL8C2514:243..583	0.69	g3176725	35	315	3.5e-33	(AC002392) unknown protein [Arabidopsis thaliana]
155725	ATU017665	ATL8S16475:610..1	gap2	ATCEA4C71407_1	92	ATL8S16475:454..115	0.58	g1084334	35	394	2.3e-38	calcium-dependent protein kinase (EC 2.7.1.-) 1 - Arabidopsis thaliana [Arabidopsis thaliana]

155726	ATU017666	ATL8C3415:1..1479	gap2	ATCEA4S12639	92	ATL8C3415:686..757	0.57	g4218011	35	433	1.1e-31	(AC006135) putative protein kinase [Arabidopsis thaliana]
155727	ATU017667	ATL8C39654:931..448	gap2	ATCEA4C126967_1	92			g3395423	35	177	7.6e-16	(AC004683) putative protein kinase [Arabidopsis thaliana]
155728	ATU017668	ATL8S16033:596..1	gap2	ATCEA4C58932_1	92	ATL8S16033:416..101	0.97	g2660671	34	493	1.4e-52	(AC002342) hypothetical protein [Arabidopsis thaliana]
155729	ATU017669	ATL8C17335:5743..2813	gap2	ATCEA4S3937, ATCEA4S11406, ATCEA4S27391	92, 88, 84	ATL8C17335:2813..4582	0.87	g4773910	34	154	4.1e-06	(AF147259) No definition line found [Arabidopsis thaliana]
155730	ATU017670	ATL8C41574:2	gap2	ATCEA4C69548	92	ATL8C41574:6	0.82	g462147	34	647	1.0e-48	GLUCOSE-6-

		49..1511		_1		59..1453						PHOSPHATE ISOMERASE, CYTOSOLIC (GPI) (PHOSPHOGLUCOSE ISOMERASE) (PGI) (PHOSPHOHEXOSE ISOMERASE) (PHI) [Arabidopsis thaliana]
155731	ATU017671	ATL8C2223:1..1016	gap2	ATCEA4C38925_1	92	ATL8C2223:341..707	0.72	g4056500	34	476	2.3e-32	(AC005896) putative acetyltransferase [Arabidopsis thaliana]
155732	ATU017672	ATL8C44170:330..1	gap2	ATCEA4S35084	92	ATL8C44170:298..78	0.62	g4581147	34	522	4.3e-40	(AC006919) unknown protein [Arabidopsis thaliana]
155733	ATU017	ATL8C4	gap2	ATCEA4	92, 86			g36872	34	216	1.4e-	(AC005

	673	6297:613..348		C16041_1, ATCEA4C16588_2				51			19	169) unknown protein [Arabidopsis thaliana]
155734	ATU017674	ATL8C33366:445..976	gap2	ATCEA4S6489	92			g2088651	34	153	8.4e-16	(AF002109) hypersensitivity-related gene 201 isolog [Arabidopsis thaliana]
155735	ATU017675	ATL8C31581:526..1	gap2	ATCEA4S5940	92			g4646198	34	365	3.5e-35	(AC007230) T23K8.6 [Arabidopsis thaliana]
155736	ATU017676	ATL8S899:1..640	gap2	ATCEA4S30271, ATCEA4S25384, ATCEA4S26057	92, 91, 86			g2253579	34	117	2.0e-10	(U78721) hypothetical protein [Arabidopsis thaliana]
155737	ATU017677	ATL8C1291:1..1269	gap2	ATCEA4C127300_1, ATCEA4S20198	92, 87			g4580391	34	145	2.9e-09	(AC007171) unknown protei

												n [Arabidopsis thaliana]
155738	ATU017678	ATL8C42335:3572..5237	gap2	ATCEA4S126	92			g4689452	34	143	1.5e-06	(AC006267) putative transposon protein [Arabidopsis thaliana]
155739	ATU017679	ATL8C37129:703..1	gap2	ATCEA4S30926, ATCEA4S6984	92, 86	ATL8C37129:695..42	0.62	g1707012	33	527		(U78721) tyrosyl-tRNA synthetase isolog [Arabidopsis thaliana]
155740	ATU017680	ATL8C23085:1..557	gap2	ATCEA4C18590_1	92			g2827551	33	758	3.8e-23	(AL021635) predicted protein [Arabidopsis thaliana]
155741	ATU017681	ATL8C42822:643..1	gap2	ATCEA4C60856_1	92			g3153205	33	272	3.0e-27	(U80922) serine/threonine protein

												phosphatase type one [Arabidopsis thaliana]
155742	ATU017682	ATL8C47025:800..1	gap2	ATCEA4C55313_1	92			g3292824	33	589	1.5e-54	(AL031018) putative protein [Arabidopsis thaliana]
155743	ATU017683	ATL8C34534:2673..1	gap2	ATCEA4S33906	92	ATL8C34534:2546..772	0.86	g3860163	32	198	7.5e-15	(AF098962) disease resistance protein RPP1-WsA [Arabidopsis thaliana]
155744	ATU017684	ATL8C5474:554..1	gap2	ATCEA4S34681, ATCEA4S33284	92, 87	ATL8C5474:462..214	0.74	g4531445	32	606	2.4e-50	(AC006224) unknown protein [Arabidopsis thaliana]
155745	ATU017685	ATL8C20090:1..1128	gap2	ATCEA4S7911	92	ATL8C20090:119..10	0.46	g4432867	32	337		(AC006300) putati

						33						ve dnaJ-like protein [Arabidopsis thaliana]
155746	ATU017686	ATL8S11195:525..1	gap2	ATCEA4S2253	92	ATL8S11195:153..40	0.43	g2529668	32	126	0.00032	(AC002535) putative photolyase/blue-light receptor [Arabidopsis thaliana]
155747	ATU017687	ATL8C25190:1..531	gap2	ATCEA4S33030	92			g957251	32	587	7.8e-57	(S77418) oxidoreductase required for shoot apex development=FEY [Arabidopsis thaliana]
155748	ATU017688	ATL8C8932:482..1	gap2	ATCEA4C234_1, ATCEA4S16803	92, 86	ATL8C8932:346..193	0.98	g3386612	31	224	1.4e-20	(AC004665) DNA-binding protei

												n, dbp [Arabidopsis thaliana]
155749	ATU017689	ATL8C8135:387..889	gap2	ATCEA4S3426	92	ATL8C8135:399..889	0.91	g3033375	31	734	2.1e-70	(AC004238) putative berberine bridge enzyme [Arabidopsis thaliana]
155750	ATU017690	ATL8C11719:1..742	gap2	ATCEA4C80748_1	92	ATL8C11719:250..728	0.88	g4191797	31	837	1.1e-84	(AC005917) putative receptor protein kinase, 3' partial [Arabidopsis thaliana]
155751	ATU017691	ATL8C25020:515..1700	gap2	ATCEA4S5621	92	ATL8C25020:517..1147	0.75	g2244831	31	209	2.0e-14	(Z97337) hypothetical protein [Arabidopsis thaliana]
155752	ATU017692	ATL8C4098:16	gap2	ATCEA4S5746	92	ATL8C4098:16	0.68	g3738297	31	215	4.1e-20	(AC005309)

		0..432 4				0..431 0						unknown protein [Arabidopsis thaliana]
155753	ATU017 693	ATL8C2 6550:1 20..12 14	gap2	ATCEA4 C10734 _1	92	ATL8C2 6550:1 20..11 57	0.64	g31691 75	31	312	2.4e-26	(AC004 401) putative serine carboxypeptidase I [Arabidopsis thaliana]
155754	ATU017 694	ATL8S1 4009:5 67..1	gap2	ATCEA4 C1026_ 1	92	ATL8S1 4009:5 20..80	0.50	g14916 15	31	426	6.5e-39	(X9992 3) male sterility 2-like protein [Arabidopsis thaliana]
155755	ATU017 695	ATL8C3 1400:1 ..388	gap2	ATCEA4 S31493	92	ATL8C3 1400:8 6..388	0.44	g41851 44	31	307	7.0e-30	(AC005 724) unknown protein [Arabidopsis thaliana]
155756	ATU017 696	ATL8S1 556:56 2..1	gap2	ATCEA4 C14373 3_1,	92, 82			g39278 25	31	279	1.7e-28	(AC005 727) putati

				ATCEA4C7417_1								ve dTDP-glucose 4-6-dehydratase [Arabidopsis thaliana].
155757	ATU017697	ATL8C12932:711..2039	gap2	ATCEA4C51137_1	92			g4531444	31	269	1.4e-22	(AC006224) putative protein kinase [Arabidopsis thaliana]
155758	ATU017698	ATL8C47579:688..2354	gap2	ATCEA4S34213	92			g4580396	31	210	7.7e-13	(AC007171) hypothetical protein [Arabidopsis thaliana]
155759	ATU017699	ATL8C6922:576..2008	gap2	ATCEA4C12720_1	92	ATL8C6922:653..1839	0.94	g462013	30	797	3.9e-71	ENDOPLASMIN HOMOLOG PRECURSOR (GRP94 HOMOLOG) [Catharanthus roseus]

155760	ATU017700	ATL8S13564:1..346	gap2	ATCEA4C4067_1	92	ATL8S13564:60..303	0.90	g2218152	30	371	1.6e-35	(AF005279) type IIIa membrane protein cp-wap13 [Vigna unguiculata]
155761	ATU017701	ATL8C40334:1..611	gap2	ATCEA4C19388_1	92	ATL8C40334:86..415	0.82	g3322324	30	117	6.4e-12	(AE001191) conserved hypothetical protein [Treponema pallidum]
155762	ATU017702	ATL8C15959:1168..1	gap2	ATCEA4S10778	92	ATL8C15959:801..61	0.62	g1694711	30	146	9.2e-14	(Y09581) FRO1 [Arabidopsis thaliana]
155763	ATU017703	ATL8C238:1..5494	gap2	ATCEA4S253, ATCEA4S11510	92, 86	ATL8C238:122..5494	0.59	g2129618	30	402	7.0e-28	hypothetical protein 1 - Arabidopsis thaliana retrotransposon Athila [Arabidopsis

												thaliana]
155764	ATU017704	ATL8C26335:583..1	gap2	ATCEA4S35022	92	ATL8C26335:533..119	0.51	g4140326	30	230	4.9e-23	(AL031282) dJ283E3.6.1 (PUTATIVE novel protein similar to many (archae)bacterial, worm and yeast hypothetical proteins) [Homo sapiens]
155765	ATU017705	ATL8S27090:1..461	gap2	ATCEA4C44443_1	92			g4371293	30	272	1.5e-23	(AC006260) hypothetical protein [Arabidopsis thaliana]
155766	ATU017706	ATL8C40740:745..1	gap2	ATCEA4S29895	92			g3236254	30	186	0.44	(AC004684) unknown protein [Arabidopsis

												thalia na]
155767	ATU017 707	ATL8C2 9372:1 ..447	gap2	ATCEA4 S3436	92	ATL8C2 9372:1 54..44 7	1.00					
155768	ATU017 708	ATL8C5 243:97 ..584	gap2	ATCEA4 S13401	92	ATL8C5 243:97 ..584	1.00					
155769	ATU017 709	ATL8C3 0458:1 69..10 21	gap2	ATCEA4 S24945	92	ATL8C3 0458:1 69..10 21	0.99					
155770	ATU017 710	ATL8C7 165:69 3..319	gap2	ATCEA4 S20410	92	ATL8C7 165:69 3..478	0.99					
155771	ATU017 711	ATL8C3 4469:1 ..664	gap2	ATCEA4 C70017 _1	92	ATL8C3 4469:2 8..129	0.99					
155772	ATU017 712	ATL8C1 4817:5 19..66	gap2	ATCEA4 S652	92	ATL8C1 4817:5 19..66	0.99					
155773	ATU017 713	ATL8C3 4863:1 1..134 6	gap2	ATCEA4 S969	92	ATL8C3 4863:1 1..134 6	0.98					
155774	ATU017 714	ATL8C3 220:10 2..307	gap2	ATCEA4 S2669	92	ATL8C3 220:10 2..307	0.98					
155775	ATU017 715	ATL8S1 8671:1 ..464	gap2	ATCEA4 C29403 _1	92	ATL8S1 8671:2 85..46 4	0.98					
155776	ATU017 716	ATL8C1 4952:7 85..10 84	gap2	ATCEA4 C3156_ 7	92	ATL8C1 4952:9 07..10 84	0.98					
155777	ATU017 717	ATL8C2 118:1. .465	gap2	ATCEA4 C46696 _1	92	ATL8C2 118:75 ..446	0.98					
155778	ATU017 718	ATL8C1 51:462 ..1	gap2	ATCEA4 S35387	92	ATL8C1 51:266 ..181	0.98					
155779	ATU017	ATL8C2	gap2	ATCEA4	91	ATL8C2	0.98	g21911	100	2210	7.3e-	(AF007

	719	6108:867..5159		C25151_1		6108:867..3728		67			214	270) A_IG002P16.18 gene product [Arabidopsis thaliana]
155780	ATU017720	ATL8C13649:1..1274	gap2	ATCEA4C1897_1	92	ATL8C13649:531..940	0.98					
155781	ATU017721	ATL8C5261:1390..2674	gap2	ATCEA4C69937_1	92	ATL8C5261:1749..2124	0.97					
155782	ATU017722	ATL8C39967:547..1	gap2	ATCEA4S6999, ATCEA4C26687_1	92, 90	ATL8C39967:546..229	0.97					
155783	ATU017723	ATL8C33024:1..570	gap2	ATCEA4S13320	92	ATL8C33024:177..570	0.97					
155784	ATU017724	ATL8C33673:1..1217	gap2	ATCEA4C48548_1	92	ATL8C33673:163..1217	0.97					
155785	ATU017725	ATL8C20269:3982..2839	gap2	ATCEA4S33085	92	ATL8C20269:3982..2915	0.97					
155786	ATU017726	ATL8C4289:934..1183	gap2	ATCEA4C43837_1	92	ATL8C4289:1091..1002	0.97					
155787	ATU017727	ATL8S13296:76..351	gap2	ATCEA4C1732_1	92	ATL8S13296:76..188	0.97					
155788	ATU017728	ATL8C29010:2	gap2	ATCEA4S26088	92	ATL8C29010:2	0.97					

		62..1010				62..1008						
155789	ATU017729	ATL8C38094:1442..652	gap2	ATCEA4S31904	92	ATL8C38094:1236..652	0.96					
155790	ATU017730	ATL8C4071:1578..1280	gap2	ATCEA4S5698	92	ATL8C4071:1471..1408	0.96					
155791	ATU017731	ATL8C45917:547..1	gap2	ATCEA4C48500_1	92	ATL8C45917:317..84	0.96					
155792	ATU017732	ATL8C17090:345..1667	gap2	ATCEA4S15287	92	ATL8C17090:345..1430	0.96					
155793	ATU017733	ATL8C32893:2735..246	gap2	ATCEA4C64758_1, ATCEA4C31960_1	92, 85	ATL8C32893:2254..246	0.96					
155794	ATU017734	ATL8S2228:59..384	gap2	ATCEA4S3533, ATCEA4C36211_2	92, 90	ATL8S2228:78..338	0.96					
155795	ATU017735	ATL8C42618:1..1381	gap2	ATCEA4C12246_1, ATCEA4C70733_2, ATCEA4S26216	92, 91, 89	ATL8C42618:268..1353	0.95					
155796	ATU017736	ATL8S14995:1..426	gap2	ATCEA4C116010_1	92	ATL8S14995:168..356	0.95					
155797	ATU017737	ATL8C3720:594..63	gap2	ATCEA4S34495, ATCEA4	92, 87	ATL8C3720:124..559	0.95					

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155798	ATU017738	ATL8C31645:526..933	gap2	ATCEA4C71697_1	92	ATL8C31645:558..695	0.95					
155799	ATU017739	ATL8C83:1..507	gap2	ATCEA4S24955, ATCEA4C30672_1	92, 89	ATL8C83:372..507	0.95					
155800	ATU017740	ATL8C3606:586..67	gap2	ATCEA4C28984_1	92	ATL8C3606:344..194	0.95					
155801	ATU017741	ATL8S29701:451..1	gap2	ATCEA4C65913_1	92	ATL8S29701:246..22	0.95					
155802	ATU017742	ATL8C17529:1390..84	gap2	ATCEA4S2326, ATCEA4S26428	92, 86	ATL8C17529:1195..84	0.95					
155803	ATU017743	ATL8C27719:973..1	gap2	ATCEA4C631_2, ATCEA4C631_1	92, 91	ATL8C27719:917..36	0.94					
155804	ATU017744	ATL8C48441:1019..56	gap2	ATCEA4C11828_1	92	ATL8C48441:949..163	0.94					
155805	ATU017745	ATL8C42471:1..793	gap2	ATCEA4C46560_1	92	ATL8C42471:48..793	0.94					
155806	ATU017746	ATL8C16262:1..1485	gap2	ATCEA4C17456_1	92	ATL8C16262:15..1485	0.94					
155807	ATU017747	ATL8S1027:1..237	gap2	ATCEA4C17995_1	92	ATL8S1027:52..113	0.94					
155808	ATU017748	ATL8C34546:502..1	gap2	ATCEA4S1570	92	ATL8C34546:53..8	0.94					
155809	ATU017	ATL8C4	gap2	ATCEA4	92, 85	ATL8C4	0.94					

	749	0867:873..394		C24668_1, ATCEA4S9388		0867:836..754						
155810	ATU017750	ATL8C13010:1..830	gap2	ATCEA4C411_1	92	ATL8C13010:106..830	0.94					
155811	ATU017751	ATL8C23726:370..37	gap2	ATCEA4S2634	92	ATL8C23726:370..37	0.94					
155812	ATU017752	ATL8C35670:723..1	gap2	ATCEA4C24446_1, ATCEA4S2270	92, 87	ATL8C35670:723..562	0.94					
155813	ATU017753	ATL8C1212:5147..2509	gap2	ATCEA4S9892	91	ATL8C1212:4983..2509	0.94	g2982436	100	600	2.9e-55	(AL022224) hypothetical protein [Arabidopsis thaliana]
155814	ATU017754	ATL8C1882:252..1007	gap2	ATCEA4S34840	92	ATL8C1882:252..1005	0.94					
155815	ATU017755	ATL8C27447:557..1	gap2	ATCEA4S26714	92	ATL8C27447:363..17	0.93					
155816	ATU017756	ATL8C1126:815..178	gap2	ATCEA4S34672, ATCEA4C5561_1, ATCEA4S31784	92, 84, 83	ATL8C1126:439..365	0.93					
155817	ATU017757	ATL8C38834:1..349	gap2	ATCEA4C2139_1	92	ATL8C38834:70..192	0.93					

155818	ATU017758	ATL8C34977:204..819	gap2	ATCEA4C10358_1	92	ATL8C34977:364..819	0.93					
155819	ATU017759	ATL8C13500:1..1677	gap2	ATCEA4C674_1, ATCEA4S14054	92, 83	ATL8C13500:22..1677	0.93					
155820	ATU017760	ATL8C36892:1571..2367	gap2	ATCEA4C17604_2, ATCEA4S5599, ATCEA4S12988, ATCEA4S26482	92, 90, 85, 82	ATL8C36892:1659..2367	0.92					
155821	ATU017761	ATL8C17562:264..1548	gap2	ATCEA4C119125_2	91	ATL8C17562:264..1548	0.92	g3335332	100	1390	2.1e-143	(AC004512) Contains similarity to S-receptor kinase gb|D88193 from Brassica rapa. [Arabidopsis thaliana]
155822	ATU017762	ATL8C42903:2339..1493	gap2	ATCEA4C57095_1	92	ATL8C42903:2339..1550	0.92					
155823	ATU017	ATL8C3	gap2	ATCEA4	92	ATL8C3	0.92					

	763	66:1..559		C114739_1		66:137..427						
155824	ATU017764	ATL8C8743:687..1513	gap2	ATCEA4S32062	92	ATL8C8743:687..1513	0.92					
155825	ATU017765	ATL8C32116:1..1114	gap2	ATCEA4S32037, ATCEA4C82294_1	92, 87	ATL8C32116:79..628	0.91					
155826	ATU017766	ATL8C24456:2012..145	gap2	ATCEA4C9394_1	92	ATL8C24456:2012..150	0.90					
155827	ATU017767	ATL8S22402:304..610	gap2	ATCEA4C36559_1	92	ATL8S22402:304..311	0.90					
155828	ATU017768	ATL8C11784:93..508	gap2	ATCEA4C1897_1	92	ATL8C11784:93..273	0.90					
155829	ATU017769	ATL8C27514:1..757	gap2	ATCEA4C2988_1	92	ATL8C27514:86..757	0.90					
155830	ATU017770	ATL8C38741:571..25	gap2	ATCEA4C31405_1	92	ATL8C38741:349..25	0.90					
155831	ATU017771	ATL8S20893:137..433	gap2	ATCEA4C64106_1	92	ATL8S20893:427..350	0.90					
155832	ATU017772	ATL8C2897:773..3427	gap2	ATCEA4S30960	92	ATL8C2897:773..3427	0.90					
155833	ATU017773	ATL8C38426:1186..1	gap2	ATCEA4C527_1	92	ATL8C38426:1118..36	0.90					
155834	ATU017774	ATL8C46613:469..89	gap2	ATCEA4S27356	92	ATL8C46613:469..81	0.90					

		7				3						
155835	ATU0177775	ATL8C33115:1..345	gap2	ATCEA4S31228	92	ATL8C33115:89..303	0.90					
155836	ATU0177776	ATL8C25980:675..1	gap2	ATCEA4C26875_1, ATCEA4S4919	92, 83	ATL8C25980:151..53	0.89					
155837	ATU0177777	ATL8C49419:1367..1114	gap2	ATCEA4C19017_1	92	ATL8C49419:1338..1128	0.89					
155838	ATU0177778	ATL8C41592:1..902	gap2	ATCEA4C54594_1	92	ATL8C41592:799..896	0.89					
155839	ATU0177779	ATL8C36700:132..1146	gap2	ATCEA4C138096_1, ATCEA4S660	92, 92	ATL8C36700:132..1045	0.89					
155840	ATU0177780	ATL8C10429:1..2372	gap2	ATCEA4S31462, ATCEA4C3973_2, ATCEA4C3973_1, ATCEA4C741661	92, 91, 87, 85	ATL8C10429:171..2372	0.89					
155841	ATU0177781	ATL8C30965:235..1280	gap2	ATCEA4C22354_1	92	ATL8C30965:235..1280	0.89					
155842	ATU0177782	ATL8C40045:717..1	gap2	ATCEA4S9981	92	ATL8C40045:694..111	0.89					
155843	ATU0177783	ATL8C16575:1	gap2	ATCEA4C5332_	92	ATL8C16575:1	0.89					

		..229		1		60..10						
155844	ATU017784	ATL8S19173:1..507	gap2	ATCEA4C23543_1, ATCEA4C4493_1	92, 86	ATL8S19173:39..479	0.88					
155845	ATU017785	ATL8S1688:1..569	gap2	ATCEA4C32938_1	92	ATL8S1688:35..89	0.88					
155846	ATU017786	ATL8C6079:867..10	gap2	ATCEA4C54855_1	92	ATL8C6079:788..10	0.88					
155847	ATU017787	ATL8C32603:608..965	gap2	ATCEA4S32590	92	ATL8C32603:848..756	0.88					
155848	ATU017788	ATL8C32548:11..1010	gap2	ATCEA4S31377	92	ATL8C32548:11..831	0.88					
155849	ATU017789	ATL8C20951:309..1	gap2	ATCEA4C22728_1	92	ATL8C20951:181..24	0.87					
155850	ATU017790	ATL8C23979:76..824	gap2	ATCEA4C1794_1, ATCEA4S29139	92, 84	ATL8C23979:475..738	0.87					
155851	ATU017791	ATL8S11426:1..574	gap2	ATCEA4C29795_1	92	ATL8S11426:80..574	0.87					
155852	ATU017792	ATL8C26988:1..557	gap2	ATCEA4C5965_1	92	ATL8C26988:54..557	0.87					
155853	ATU017793	ATL8C2076:3852..1100	gap2	ATCEA4S34811	91	ATL8C2076:3741..1100	0.87	g4903018	100	1205	1.2e-123	(AB027507) ACE [Arabidopsis thaliana]
155854	ATU017794	ATL8C46464:9	gap2	ATCEA4C29974	92	ATL8C46464:9	0.87					

		25..74		1		17..74						
155855	ATU0177795	ATL8C5449:1..1520	gap2	ATCEA4S2915	92	ATL8C5449:328..1520	0.86					
155856	ATU0177796	ATL8C2276:5425..167	gap2	ATCEA4C7329_1, ATCEA4S460	92, 88	ATL8C2276:5425..167	0.86					
155857	ATU0177797	ATL8C45675:278..1244	gap2	ATCEA4S10321	92	ATL8C45675:278..1087	0.86					
155858	ATU0177798	ATL8C16459:467..1	gap2	ATCEA4S11020	92	ATL8C16459:467..241	0.86					
155859	ATU0177799	ATL8C12421:251..807	gap2	ATCEA4C21923_1, ATCEA4S18645	92, 83	ATL8C12421:363..792	0.85					
155860	ATU0177800	ATL8C27680:85..1427	gap2	ATCEA4C5303_1	92	ATL8C27680:85..1065	0.85					
155861	ATU0177801	ATL8C41244:1277..198	gap2	ATCEA4C11138_1, ATCEA4S30603	92, 83	ATL8C41244:1277..396	0.85					
155862	ATU0177802	ATL8C6471:1..546	gap2	ATCEA4C71820_1	92	ATL8C6471:165..412	0.85					
155863	ATU0177803	ATL8C22416:1819..1	gap2	ATCEA4C523_1, ATCEA4S17985, ATCEA4S35820	91, 89, 88	ATL8C22416:1632..1140	0.85	g1168546	100	1135	1.5e-85	HOMEOBOX-LEUCINE ZIPPER PROTEIN ATHB-5 (HD-

												ZIP PROTEIN ATHB-5) [Arabidopsis thaliana]
155864	ATU017804	ATL8C33190:1470..672	gap2	ATCEA4S14363	92	ATL8C33190:1133..1037	0.85					
155865	ATU017805	ATL8C571:1..438	gap2	ATCEA4C887181	92	ATL8C571:43..438	0.85					
155866	ATU017806	ATL8C23500:77..1061	gap2	ATCEA4S13509, ATCEA4S13276	92, 82	ATL8C23500:77..890	0.85					
155867	ATU017807	ATL8S680:551..56	gap2	ATCEA4S33469	92	ATL8S680:537..192	0.85					
155868	ATU017808	ATL8C39070:72..670	gap2	ATCEA4S9972	92	ATL8C39070:72..655	0.84					
155869	ATU017809	ATL8C6479:1437..53	gap2	ATCEA4S6783, ATCEA4C51177_1, ATCEA4C46458_1, ATCEA4S31026	92, 91, 88, 88	ATL8C6479:1268..389	0.84					
155870	ATU017810	ATL8C16648:1914..1475	gap2	ATCEA4C16864_1	92	ATL8C16648:1889..1667	0.84					
155871	ATU017811	ATL8C49271:111..13	gap2	ATCEA4S12180	92	ATL8C49271:1388..1	0.84					

		88				11						
155872	ATU017812	ATL8C11031:603..293	gap2	ATCEA4S1914	92	ATL8C11031:379..293	0.84					
155873	ATU017813	ATL8C13254:1145..427	gap2	ATCEA4S19066	92	ATL8C13254:1145..733	0.84					
155874	ATU017814	ATL8C33006:753..1	gap2	ATCEA4S7390, ATCEA4S1651	92, 82	ATL8C33006:753..57	0.83					
155875	ATU017815	ATL8C15501:179..1883	gap2	ATCEA4S5339, ATCEA4C6139_1, ATCEA4C4898_1, ATCEA4S23909	91, 90, 83, 83	ATL8C15501:279..1883	0.83	g4314378	100	1550	1.9e-163	(AC006232) putative lipase [Arabidopsis thaliana]
155876	ATU017816	ATL8C5666:688..44	gap2	ATCEA4S690	92	ATL8C5666:617..44	0.82					
155877	ATU017817	ATL8C39605:1131..358	gap2	ATCEA4S6244	92	ATL8C39605:1044..358	0.82					
155878	ATU017818	ATL8C2734:15..1186	gap2	ATCEA4C118284_1	92	ATL8C2734:29..1186	0.82					
155879	ATU017819	ATL8C30320:1251..4881	gap2	ATCEA4S35769	92	ATL8C30320:1251..4881	0.82					
155880	ATU017820	ATL8C21638:419..5	gap2	ATCEA4S2157	92	ATL8C21638:355..5	0.82					
155881	ATU017821	ATL8C20146:2858..1824	gap2	ATCEA4S30988	92	ATL8C20146:2858..1824	0.82					

155882	ATU017822	ATL8C21646:724..1	gap2	ATCEA4C61345_1	92	ATL8C21646:547..182	0.82					
155883	ATU017823	ATL8C26208:84..1036	gap2	ATCEA4C70877_1, ATCEA4S35063	92, 86	ATL8C26208:84..854	0.81					
155884	ATU017824	ATL8C24327:188..883	gap2	ATCEA4S26034	92	ATL8C24327:188..702	0.81					
155885	ATU017825	ATL8S28396:322..620	gap2	ATCEA4S32813	92	ATL8S28396:322..498	0.81					
155886	ATU017826	ATL8C37266:3023..1	gap2	ATCEA4S23438, ATCEA4S18710, ATCEA4S11460	92, 91, 89	ATL8C37266:3023..288	0.81					
155887	ATU017827	ATL8C1379:3648..2343	gap2	ATCEA4C46904_1	92	ATL8C1379:3648..2475	0.81					
155888	ATU017828	ATL8C36219:438..1918	gap2	ATCEA4S34305	92	ATL8C36219:438..1903	0.81					
155889	ATU017829	ATL8C10828:1682..339	gap2	ATCEA4S31173	92	ATL8C10828:1682..343	0.81					
155890	ATU017830	ATL8C29750:119..736	gap2	ATCEA4S36057	92	ATL8C29750:119..551	0.81					
155891	ATU017831	ATL8C14782:2002..4	gap2	ATCEA4S178, ATCEA4	91, 86	ATL8C14782:1979..4	0.81	g4038066	100	545	2.4e-18	(AC005897) hypoth

		6		S253		6						etical protein [Arabidopsis thaliana]
155892	ATU017832	ATL8C34667:1054..358	gap2	ATCEA4C89373_1	92	ATL8C34667:1054..579	0.81					
155893	ATU017833	ATL8C29825:643..1	gap2	ATCEA4S24378, ATCEA4C100354_1	92, 91	ATL8C29825:536..174	0.81					
155894	ATU017834	ATL8C35070:1..1462	gap2	ATCEA4C78745_1, ATCEA4S27571, ATCEA4S1545, ATCEA4C4858_1	92, 91, 90, 85	ATL8C35070:465..1462	0.80					
155895	ATU017835	ATL8C14703:751..218	gap2	ATCEA4C11044_1	92	ATL8C14703:751..245	0.80					
155896	ATU017836	ATL8S5401:665..72	gap2	ATCEA4S10508	92	ATL8S5401:665..130	0.80					
155897	ATU017837	ATL8S4905:320..1	gap2	ATCEA4C22327_1	92	ATL8S4905:320..252	0.80					
155898	ATU017838	ATL8C24785:9265..12140	gap2	ATCEA4C73514_1	92	ATL8C24785:9311..12140	0.80					
155899	ATU017839	ATL8C25901:1	gap2	ATCEA4C8704_	92	ATL8C25901:1	0.80					

		85..2526		1		85..2526						
155900	ATU017840	ATL8C20366:401..1	gap2	ATCEA4C1897_1	92	ATL8C20366:394..230	0.80					
155901	ATU017841	ATL8C10663:1417..410	gap2	ATCEA4S33971, ATCEA4C9727_1	92, 83	ATL8C10663:1157..562	0.80					
155902	ATU017842	ATL8S13134:387..1	gap2	ATCEA4C8374_1	92	ATL8S13134:321..199	0.79					
155903	ATU017843	ATL8C6066:57..658	gap2	ATCEA4C115819_1	92	ATL8C6066:57..426	0.79					
155904	ATU017844	ATL8C1493:401..870	gap2	ATCEA4S928	92	ATL8C1493:401..870	0.79					
155905	ATU017845	ATL8C21982:2534..2027	gap2	ATCEA4S35664	92	ATL8C21982:2534..2027	0.79					
155906	ATU017846	ATL8C43657:216..975	gap2	ATCEA4C118167_1	92	ATL8C43657:975..216	0.79					
155907	ATU017847	ATL8C26617:90..878	gap2	ATCEA4C50336_1	91	ATL8C26617:137..784	0.79	g4006934	100	846	7.1e-71	(AJ012571) glutathione transferase [Arabidopsis thaliana]
155908	ATU017848	ATL8C30754:1155..4824	gap2	ATCEA4S11189	92	ATL8C30754:1155..4824	0.79					

155909	ATU0178 49	ATL8C704:452..1318	gap2	ATCEA4C724591	92	ATL8C704:537..1318	0.78					
155910	ATU0178 50	ATL8C26768:461..1	gap2	ATCEA4S2931	92	ATL8C26768:461..163	0.78					
155911	ATU0178 51	ATL8C41542:1..527	gap2	ATCEA4S2445	92	ATL8C41542:24..527	0.78					
155912	ATU0178 52	ATL8C31617:1..829	gap2	ATCEA4C129014_1	92	ATL8C31617:54..829	0.78					
155913	ATU0178 53	ATL8C10954:129..4435	gap2	ATCEA4S3050	92	ATL8C10954:129..4435	0.78					
155914	ATU0178 54	ATL8C32299:1..560	gap2	ATCEA4S35911, ATCEA4S5985	92, 84	ATL8C32299:85..560	0.78					
155915	ATU0178 55	ATL8C35299:419..1195	gap2	ATCEA4S33160	92	ATL8C35299:419..1171	0.78					
155916	ATU0178 56	ATL8C27547:161..664	gap2	ATCEA4C7600_1	92	ATL8C27547:161..664	0.78					
155917	ATU0178 57	ATL8C41757:188..8615	gap2	ATCEA4S178	91	ATL8C41757:188..5121, ATL8C41757:6636..8253	0.77, 0.47	g4567295, g4038066, g3319360	100, 100, 53	2224, 733, 1617	5.2e-229, 1.1e-50, 1.5e-152	(AC006918) putative polpolyprotein [Arabidopsis thaliana]; (AC005897) hypothetical

												protein [Arabidopsis thaliana]; (AF077408) contains similarity to Vicia faba retrotranspo son-like gene (GB:AB007467) [Arabidopsis thaliana]
155918	ATU017858	ATL8C28158:40..885	gap2	ATCEA4S2909	92	ATL8C28158:417..885	0.77					
155919	ATU017859	ATL8C26973:716..110	gap2	ATCEA4C120043_1	92	ATL8C26973:716..110	0.77					
155920	ATU017860	ATL8C23216:1..658	gap2	ATCEA4C69802_1	92	ATL8C23216:66..523	0.76					
155921	ATU017861	ATL8C36711:727..197	gap2	ATCEA4S2435	92	ATL8C36711:727..200	0.76					
155922	ATU017862	ATL8C43843:1	gap2	ATCEA4S32873	92	ATL8C43843:7	0.76					

		..569				1..460						
155923	ATU0178 63	ATL8C22946:1219..45	gap2	ATCEA4C5192_2	92	ATL8C22946:1009..45	0.76					
155924	ATU0178 64	ATL8C27472:1124..263	gap2	ATCEA4S34159	92	ATL8C27472:558..263	0.76					
155925	ATU0178 65	ATL8C18511:601..1	gap2	ATCEA4C117726_1	92	ATL8C18511:601..125	0.76					
155926	ATU0178 66	ATL8S10673:49..309	gap2	ATCEA4S7715	92	ATL8S10673:309..49	0.76					
155927	ATU0178 67	ATL8C6379:2434..1439	gap2	ATCEA4C101596_1	92	ATL8C6379:2434..1795	0.76					
155928	ATU0178 68	ATL8C16448:113..569	gap2	ATCEA4S3566	92	ATL8C16448:134..376	0.75					
155929	ATU0178 69	ATL8C49661:1..362	gap2	ATCEA4S1447, ATCEA4C14183_1	92, 89	ATL8C49661:155..43	0.75					
155930	ATU0178 70	ATL8C24748:699..1414	gap2	ATCEA4C40866_1, ATCEA4S35136	92, 88	ATL8C24748:699..1119	0.75					
155931	ATU0178 71	ATL8C17952:1..424	gap2	ATCEA4C47463_1	92	ATL8C17952:76..424	0.75					
155932	ATU0178 72	ATL8C39212:709..192	gap2	ATCEA4S5710	92	ATL8C39212:385..215	0.74					
155933	ATU0178 73	ATL8C47378:178..55	gap2	ATCEA4S32171	92	ATL8C47378:398..53	0.74					

		6				3						
155934	ATU017874	ATL8C5485:1483..183	gap2	ATCEA4C4021_1	92	ATL8C5485:944..183	0.74					
155935	ATU017875	ATL8C49976:52..502	gap2	ATCEA4S26103	92	ATL8C49976:52..304	0.74					
155936	ATU017876	ATL8C8087:67..416	gap2	ATCEA4C77580_1	92	ATL8C8087:67..384	0.74					
155937	ATU017877	ATL8C42026:137..4234	gap2	ATCEA4S12665, ATCEA4C69018_1, ATCEA4S2593	92, 90, 89	ATL8C42026:137..4234	0.74					
155938	ATU017878	ATL8C41967:2180..2888	gap2	ATCEA4S178, ATCEA4S253	92, 86	ATL8C41967:2271..2888	0.73					
155939	ATU017879	ATL8C13782:1..867	gap2	ATCEA4C24713_1	92	ATL8C13782:428..867	0.73					
155940	ATU017880	ATL8C17913:74..1152	gap2	ATCEA4C2038_1, ATCEA4S24643, ATCEA4S24641, ATCEA4S24648, ATCEA4S34217	92, 91, 88, 83, 83	ATL8C17913:345..989	0.73					
155941	ATU017881	ATL8C49164:740..1	gap2	ATCEA4C76919_2,	92, 90, 89, 82	ATL8C49164:688..54	0.73					

				ATCEA4S33061, ATCEA4C76919_1, ATCEA4S35649		5						
155942	ATU017882	ATL8C19986:427..777	gap2	ATCEA4C34062_1	92	ATL8C19986:701..739	0.73					
155943	ATU017883	ATL8C38871:597..1	gap2	ATCEA4C78146_1	92	ATL8C38871:531..105	0.73					
155944	ATU017884	ATL8C24096:1254..48	gap2	ATCEA4S7687	92	ATL8C24096:1254..48	0.73					
155945	ATU017885	ATL8C3626:85..949	gap2	ATCEA4S32438, ATCEA4S911	92, 85	ATL8C3626:161..722	0.73					
155946	ATU017886	ATL8C48505:817..1	gap2	ATCEA4C55339_1	92	ATL8C48505:817..232	0.73					
155947	ATU017887	ATL8C33278:4538..145	gap2	ATCEA4S2197	92	ATL8C33278:4538..145	0.72					
155948	ATU017888	ATL8S25245:472..1	gap2	ATCEA4C49078_1	92	ATL8S25245:363..160	0.72					
155949	ATU017889	ATL8C14514:341..816	gap2	ATCEA4C23104_1	92	ATL8C14514:341..489	0.71					
155950	ATU017890	ATL8S13632:446..19	gap2	ATCEA4S15676	92	ATL8S13632:446..19	0.71					

		1				1						
155951	ATU017891	ATL8C3186:1123..869	gap2	ATCEA4C40736_1	92	ATL8C3186:1122..869	0.71					
155952	ATU017892	ATL8C1240:1536..235	gap2	ATCEA4C69798_1	92	ATL8C1240:1536..235	0.71					
155953	ATU017893	ATL8S16510:400..1	gap2	ATCEA4S1031	92	ATL8S16510:357..45	0.71					
155954	ATU017894	ATL8C10860:440..2771	gap2	ATCEA4C107012_1, ATCEA4S11906, ATCEA4S20189	92, 85, 82	ATL8C10860:2763..440	0.71					
155955	ATU017895	ATL8C1996:709..1123	gap2	ATCEA4C7396_1	92	ATL8C1996:848..1062	0.71					
155956	ATU017896	ATL8S30407:1..404	gap2	ATCEA4C60749_1	92	ATL8S30407:173..286	0.70					
155957	ATU017897	ATL8C31075:70..683	gap2	ATCEA4C3943_1	92	ATL8C31075:70..311	0.70					
155958	ATU017898	ATL8C30018:1007..1151	gap2	ATCEA4S2943	92	ATL8C30018:1077..1144	0.70					
155959	ATU017899	ATL8S5078:587..1	gap2	ATCEA4S5497	92	ATL8S5078:176..77	0.70					
155960	ATU017900	ATL8C535:1006..1	gap2	ATCEA4S19245	92	ATL8C535:1006..464	0.69					
155961	ATU017901	ATL8C20454:227..17	gap2	ATCEA4S35275,	92, 90	ATL8C20454:227..14	0.69					

SUBSTITUTE SHEET (RULE 26)

		47		ATCEA4 S34504		53						
155962	ATU017 902	ATL8S6 029:1. .514	gap2	ATCEA4 C302_1	92	ATL8S6 029:46 ..208	0.69					
155963	ATU017 903	ATL8C4 0835:3 81..1	gap2	ATCEA4 C11572 3_1	92	ATL8C4 0835:2 59..62	0.69					
155964	ATU017 904	ATL8C3 5777:3 42..1	gap2	ATCEA4 C978_1 , ATCEA4 C978_2 , ATCEA4 S24970	92, 87, 83	ATL8C3 5777:2 60..45	0.69					
155965	ATU017 905	ATL8C4 0107:1 ..649	gap2	ATCEA4 C1891_ 1	92	ATL8C4 0107:4 5..385	0.69					
155966	ATU017 906	ATL8C1 2680:2 647..7 72	gap2	ATCEA4 C1868_ 1, ATCEA4 S23920	91, 90	ATL8C1 2680:2 539..1 006	0.68	g43247 14	100	2413	3.2e-207	(AF110 771) ammoni um transp orter [Arabi dopsis thalia na]
155967	ATU017 907	ATL8S1 9459:2 08..55 7	gap2	ATCEA4 S6031	92	ATL8S1 9459:2 08..42 2	0.68					
155968	ATU017 908	ATL8C4 6009:7 48..40 10	gap2	ATCEA4 C1941_ 1, ATCEA4 S30373 , ATCEA4 S35884 , ATCEA4 S3656	92, 88, 87, 84	ATL8C4 6009:7 48..38 62	0.68					

155969	ATU017909	ATL8S14167:388..1	gap2	ATCEA4C22200_1	92	ATL8S14167:351..226	0.68					
155970	ATU017910	ATL8C11435:126..1251	gap2	ATCEA4S607	92	ATL8C11435:126..1251	0.68					
155971	ATU017911	ATL8S24743:1..461	gap2	ATCEA4S791	92	ATL8S24743:336..461	0.68					
155972	ATU017912	ATL8C16666:201..1010	gap2	ATCEA4C129014_1	92	ATL8C16666:201..964	0.68					
155973	ATU017913	ATL8C36018:1..411	gap2	ATCEA4S1117	92	ATL8C36018:243..411	0.67					
155974	ATU017914	ATL8C30275:419..1082	gap2	ATCEA4S34730	92	ATL8C30275:420..660	0.67					
155975	ATU017915	ATL8S11551:1..462	gap2	ATCEA4C30829_1	92	ATL8S11551:114..462	0.67					
155976	ATU017916	ATL8C23949:1049..1	gap2	ATCEA4C1932_1	92	ATL8C23949:850..16	0.67					
155977	ATU017917	ATL8C14792:2133..2987	gap2	ATCEA4C14810_1	92	ATL8C14792:2166..2987	0.67					
155978	ATU017918	ATL8C17373:1239..3324	gap2	ATCEA4S558	92	ATL8C17373:1239..3324	0.66					
155979	ATU017919	ATL8C16982:130..1617	gap2	ATCEA4S16043, ATCEA4S33054	92, 90	ATL8C16982:152..1617	0.65					

155980	ATU017920	ATL8S30502:538..440	gap2	ATCEA4C7690_1	92	ATL8S30502:534..440	0.65					
155981	ATU017921	ATL8C9569:3158..569	gap2	ATCEA4C117837_1, ATCEA4C243961	92, 82	ATL8C9569:3158..569	0.65					
155982	ATU017922	ATL8C48956:96..1242	gap2	ATCEA4S36031	92	ATL8C48956:96..1133	0.65					
155983	ATU017923	ATL8C6272:1..436	gap2	ATCEA4C7169_1	92	ATL8C6272:57..436	0.64					
155984	ATU017924	ATL8C26339:811..577	gap2	ATCEA4S24696, ATCEA4S33952	92, 88	ATL8C26339:809..753	0.64					
155985	ATU017925	ATL8C35225:1..477	gap2	ATCEA4C407_1	92	ATL8C35225:72..477	0.64					
155986	ATU017926	ATL8C21970:1..725	gap2	ATCEA4C18949_1	92	ATL8C21970:234..725	0.64					
155987	ATU017927	ATL8C33985:1..1348	gap2	ATCEA4C16058_1, ATCEA4S11625, ATCEA4S5573, ATCEA4S12314	92, 91, 89, 84	ATL8C33985:131..1341	0.64					
155988	ATU017928	ATL8C15914:898..102	gap2	ATCEA4S12633	92	ATL8C15914:426..102	0.63					
155989	ATU017	ATL8C3	gap2	ATCEA4	92	ATL8C3	0.63					

	929	198:756..223		C44478_1		198:622..344						
155990	ATU017930	ATL8C40104:121..645	gap2	ATCEA4S548, ATCEA4S608	92, 83	ATL8C40104:419..645	0.63					
155991	ATU017931	ATL8C39244:1..459	gap2	ATCEA4C13387_1	92	ATL8C39244:233..412	0.63					
155992	ATU017932	ATL8C9083:1..314	gap2	ATCEA4S822	92	ATL8C9083:130..314	0.62					
155993	ATU017933	ATL8C22573:205..1428	gap2	ATCEA4S35907	92	ATL8C22573:205..1244	0.62					
155994	ATU017934	ATL8C15631:1274..3347	gap2	ATCEA4S3810	92	ATL8C15631:1274..3347	0.62					
155995	ATU017935	ATL8C4152:3675..1	gap2	ATCEA4C24482_1	92	ATL8C4152:3675..511	0.62					
155996	ATU017936	ATL8C28286:103..826	gap2	ATCEA4C118638_1	92	ATL8C28286:103..802	0.61					
155997	ATU017937	ATL8C22282:366..552	gap2	ATCEA4S10639	92	ATL8C22282:421..530	0.61					
155998	ATU017938	ATL8C11538:1..786	gap2	ATCEA4C32179_1	92	ATL8C11538:568..764	0.60					
155999	ATU017939	ATL8C33599:86..362	gap2	ATCEA4S2768	92	ATL8C33599:298..362	0.60					
156000	ATU017940	ATL8C10996:1225..7	gap2	ATCEA4S32431,	92, 82	ATL8C10996:1222..7	0.60					

		39		ATCEA4C135726_1		83						
156001	ATU017941	ATL8C10258:440..1	gap2	ATCEA4S31894	92	ATL8C10258:371..341	0.60					
156002	ATU017942	ATL8C22526:671..213	gap2	ATCEA4C6120_1	92	ATL8C22526:614..356	0.60					
156003	ATU017943	ATL8C18939:879..706	gap2	ATCEA4C4549_1	92	ATL8C18939:859..710	0.60					
156004	ATU017944	ATL8S1443:157..1	gap2	ATCEA4S31310, ATCEA4C2666_2, ATCEA4S34017	92, 92, 83	ATL8S1443:157..20	0.60					
156005	ATU017945	ATL8C10304:941..1	gap2	ATCEA4S8387	92	ATL8C10304:941..609	0.59					
156006	ATU017946	ATL8C33358:992..177	gap2	ATCEA4C911_1, ATCEA4C911_2	92, 89	ATL8C33358:430..177	0.59					
156007	ATU017947	ATL8C44986:1021..229	gap2	ATCEA4S10398	92	ATL8C44986:1000..229	0.59					
156008	ATU017948	ATL8S16226:437..67	gap2	ATCEA4C16884_1	92	ATL8S16226:436..306	0.59					
156009	ATU017949	ATL8C9358:1..557	gap2	ATCEA4S2921	92	ATL8C9358:145..557	0.59					
156010	ATU017	ATL8C2	gap2	ATCEA4	92	ATL8C2	0.59					

	950	3829:218..912		C11436_1		3829:220..912						
156011	ATU017951	ATL8C49244:295..805	gap2	ATCEA4C18650_1	92	ATL8C49244:467..628	0.59					
156012	ATU017952	ATL8C23371:10004..1567	gap2	ATCEA4S178, ATCEA4S344, ATCEA4S27399, ATCEA4S253	91, 91, 87, 86	ATL8C23371:10004..1796	0.59	g4773908	100	3971	0.0	(AF147259) No definition line found [Arabidopsis thaliana]
156013	ATU017953	ATL8S18726:1..424	gap2	ATCEA4C24259_1	92	ATL8S18726:103..392	0.58					
156014	ATU017954	ATL8C267:319..1021	gap2	ATCEA4C38131_1	92	ATL8C267:319..1021	0.58					
156015	ATU017955	ATL8C32065:1576..95	gap2	ATCEA4C120876_1, ATCEA4S27119, ATCEA4C19491_1, ATCEA4C120877_1	92, 90, 90, 87	ATL8C32065:1330..95	0.58					
156016	ATU017956	ATL8C41911:824..306	gap2	ATCEA4S640	92	ATL8C41911:579..306	0.58					
156017	ATU017957	ATL8C25860:999..49	gap2	ATCEA4C2675_1	92	ATL8C25860:978..49	0.58					

		1				1						
156018	ATU0179 58	ATL8S1365:44..322	gap2	ATCEA4S34050	92	ATL8S1365:49..322	0.58					
156019	ATU0179 59	ATL8C20518:135..1195	gap2	ATCEA4S32416	92	ATL8C20518:1195..135	0.58					
156020	ATU0179 60	ATL8C32930:446..1008	gap2	ATCEA4C28817_1	92	ATL8C32930:446..984	0.58					
156021	ATU0179 61	ATL8S7155:568..72	gap2	ATCEA4S8089	92	ATL8S7155:568..72	0.58					
156022	ATU0179 62	ATL8C17672:94..2704	gap2	ATCEA4S1059	92	ATL8C17672:94..2704	0.57					
156023	ATU0179 63	ATL8C16570:554..142	gap2	ATCEA4S1385	92	ATL8C16570:554..164	0.57					
156024	ATU0179 64	ATL8C21454:598..77	gap2	ATCEA4C4766_1	92	ATL8C21454:547..377	0.56					
156025	ATU0179 65	ATL8C42418:264..703	gap2	ATCEA4S16819	92	ATL8C42418:703..264	0.56					
156026	ATU0179 66	ATL8S5490:1..239	gap2	ATCEA4C27765_1	92	ATL8S5490:186..239	0.56					
156027	ATU0179 67	ATL8C41758:7804..10579	gap2	ATCEA4S4637	92	ATL8C41758:7804..10420	0.55					
156028	ATU0179 68	ATL8C1304:5109..1468	gap2	ATCEA4S13901	91	ATL8C1304:5109..1468	0.55	g3193329	100	1153	1.1e-91	(AF069299) contains similarity

												to EF-hand calcium-binding domain (Pfam: efhand.hmm, score; 16.10) [Arabidopsis thaliana]
156029	ATU017969	ATL8C46282:333..1307	gap2	ATCEA4S1077, ATCEA4C517621	92, 91	ATL8C46282:333..922	0.55					
156030	ATU017970	ATL8C4918:3013..185	gap2	ATCEA4S178, ATCEA4S11082, ATCEA4S253	91, 87, 86	ATL8C4918:2648..1096	0.55	g3695396, g3695399	100, 92	2056, 610	3.7e-164, 2.0e-80	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]; (AF096372) contai

												ns similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
156031	ATU0171971	ATL8C42786:1265..21	gap2	ATCEA4C23161_1	92	ATL8C42786:1265..21	0.55					
156032	ATU0171972	ATL8C2213:338..36	gap2	ATCEA4S32415	92	ATL8C2213:172..48	0.55					
156033	ATU0171973	ATL8C18857:390..151	gap2	ATCEA4C28935_1	92	ATL8C18857:300..172	0.55					
156034	ATU0171974	ATL8S5981:40..377	gap2	ATCEA4C4145_1	92	ATL8S5981:105..239	0.55					
156035	ATU0171975	ATL8C20840:1..463	gap2	ATCEA4C31051_1	92	ATL8C20840:410..463	0.54					
156036	ATU0171976	ATL8C27436:555..720	gap2	ATCEA4S35724	92	ATL8C27436:575..664	0.54					
156037	ATU0171977	ATL8C39004:1365..848	gap2	ATCEA4C4951_1	92	ATL8C39004:1364..848	0.54					

156038	ATU017978	ATL8C28541:408..648	gap2	ATCEA4C25027_1	92	ATL8C28541:468..640	0.54					
156039	ATU017979	ATL8C45398:509..1120	gap2	ATCEA4C4419_1	92	ATL8C45398:509..1077	0.53					
156040	ATU017980	ATL8C38013:552..80	gap2	ATCEA4C17693_1	92	ATL8C38013:436..307	0.53					
156041	ATU017981	ATL8C20113:58..1090	gap2	ATCEA4S2250	92	ATL8C20113:58..1068	0.53					
156042	ATU017982	ATL8C9002:3474..1	gap2	ATCEA4S178, ATCEA4C251_4, ATCEA4S253, ATCEA4S2375	91, 90, 88, 83	ATL8C9002:3250..31	0.53	g4038066, g4455185, g4567295	100, 54, 32	786, 212, 498		(AC005897) hypothetical protein [Arabidopsis thaliana]; (AL035521) putative protein [Arabidopsis thaliana]; (AC006918) putative polpolyprotein [Arabidopsis thalia

												na]
156043	ATU0179 83	ATL8C24168:1305..1895	gap2	ATCEA4C27346_1	92	ATL8C24168:1311..1895	0.53					
156044	ATU0179 84	ATL8C32050:1..1590	gap2	ATCEA4C89243_1, ATCEA4S31288, ATCEA4C93057_1, ATCEA4S7944	92, 86, 83, 82	ATL8C32050:72..718	0.53					
156045	ATU0179 85	ATL8C16146:792..1255	gap2	ATCEA4S7381	92	ATL8C16146:814..1255	0.52					
156046	ATU0179 86	ATL8C18341:787..1	gap2	ATCEA4C2087_1	92	ATL8C18341:783..54	0.52					
156047	ATU0179 87	ATL8C2890:1272..1	gap2	ATCEA4S36331, ATCEA4S35398, ATCEA4C1749_1	92, 90, 83	ATL8C2890:1228..156	0.51					
156048	ATU0179 88	ATL8S21082:418..58	gap2	ATCEA4S3012	92	ATL8S21082:418..58	0.51					
156049	ATU0179 89	ATL8C38745:1277..13	gap2	ATCEA4S2610	92	ATL8C38745:1216..13	0.51					
156050	ATU0179 90	ATL8C7364:1466..482	gap2	ATCEA4C10608_1, ATCEA4S16941	92, 90	ATL8C7364:1295..482	0.51					

156051	ATU0179 91	ATL8C22149:696..257	gap2	ATCEA4C38932_1	92	ATL8C22149:423..289	0.51					
156052	ATU0179 92	ATL8C44938:301..891	gap2	ATCEA4S533	92	ATL8C44938:412..891	0.50					
156053	ATU0179 93	ATL8C49086:1..966	gap2	ATCEA4C1739_1	92	ATL8C49086:715..934	0.50					
156054	ATU0179 94	ATL8C45775:566..147	gap2	ATCEA4S2517	92	ATL8C45775:322..147	0.50					
156055	ATU0179 95	ATL8C349:2272..199	gap2	ATCEA4C21719_1	92	ATL8C349:2272..230	0.49					
156056	ATU0179 96	ATL8C26366:697..190	gap2	ATCEA4C63974_1	92	ATL8C26366:664..190	0.48					
156057	ATU0179 97	ATL8C43026:380..1338	gap2	ATCEA4S29976	92	ATL8C43026:380..1288	0.48					
156058	ATU0179 98	ATL8C4911:624..1	gap2	ATCEA4C86271_1, ATCEA4C86271_2	92, 92	ATL8C4911:380..84	0.48					
156059	ATU0179 99	ATL8C21154:15154..10441	gap2	ATCEA4S179, ATCEA4S3937, ATCEA4S11082, ATCEA4S11406	91, 90, 88, 82	ATL8C21154:12807..10441, ATL8C21154:15154..14330	0.47, 0.71	g3047073, g4773910	100, 46	2508, 211	9.7e-157, 2.8e-40	(AF058825) contains similarity to retrotranspos on-like

												proteins [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
156060	ATU018000	ATL8C41358:267..87	gap2	ATCEA4S36363	92	ATL8C41358:245..96	0.47					
156061	ATU018001	ATL8C23366:184..805	gap2	ATCEA4S1892	92	ATL8C23366:227..800	0.47					
156062	ATU018002	ATL8C10423:876..4291	gap2	ATCEA4S15016, ATCEA4C7853_1	91, 86	ATL8C10423:906..4291	0.47	g14197758, g4584535	100, 69	1121, 892		(X98795) geranylgeranyl pyrophosphate synthase [Sinapis alba]; (AL049608) putative protein [Arabidopsis

												thaliana]
156063	ATU018003	ATL8S2222:567..221	gap2	ATCEA4C5734_1	92	ATL8S2222:520..221	0.46					
156064	ATU018004	ATL8S20395:22..409	gap2	ATCEA4S5399	92	ATL8S20395:409..22	0.46					
156065	ATU018005	ATL8C25249:2393..885	gap2	ATCEA4S35316	91	ATL8C25249:2320..885	0.45	g4539408	100	581	8.4e-32	(AL049524) putative alpha NAC [Arabidopsis thaliana]
156066	ATU018006	ATL8C32281:1..872	gap2	ATCEA4C15715_1	92	ATL8C32281:76..872	0.44					
156067	ATU018007	ATL8C33649:1..545	gap2	ATCEA4S3996	92	ATL8C33649:220..545	0.44					
156068	ATU018008	ATL8C37495:218..759	gap2	ATCEA4S12557, ATCEA4C28195_1	92, 88	ATL8C37495:218..759	0.44					
156069	ATU018009	ATL8C23939:2139..249	gap2	ATCEA4C27116_1	92	ATL8C23939:2123..249	0.41					
156070	ATU018010	ATL8C47937:26..2589	gap2	ATCEA4S4775	92	ATL8C47937:26..2589	0.41					
156071	ATU018011	ATL8C3189:5546..8268	gap2	ATCEA4S344, ATCEA4S178, ATCEA4	91, 90, 87, 86	ATL8C3189:5642..8268	0.41	g4038066, g4773908	100, 31	692, 1162	1.3e-46, 6.5e-109	(AC005897) hypothetical protei

				S253, ATCEA4 S27399								n [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
156072	ATU018012	ATL8C4 9626:2 299..1 955	gap2	ATCEA4 S26839	92							
156073	ATU018013	ATL8S1 9385:5 05..33 0	gap2	ATCEA4 C21389 _1	92							
156074	ATU018014	ATL8C2 1459:1 88..45 7	gap2	ATCEA4 S1174, ATCEA4 S35977	92, 87							
156075	ATU018015	ATL8C2 3077:8 3..1	gap2	ATCEA4 S23544	92							
156076	ATU018016	ATL8C2 6894:1 ..174	gap2	ATCEA4 S33456	92							
156077	ATU018017	ATL8C2 6901:8 24..43 7	gap2	ATCEA4 S21012	92							
156078	ATU018018	ATL8C1 444:1. .193	gap2	ATCEA4 S13006	92							
156079	ATU018019	ATL8C3 8905:6 32..72	gap2	ATCEA4 C80713 _2	92							

		0										
156080	ATU018020	ATL8S1928:577..243	gap2	ATCEA4C121396_1	92							
156081	ATU018021	ATL8C1514:993..745	gap2	ATCEA4S27046	92							
156082	ATU018022	ATL8S27371:520..163	gap2	ATCEA4C38578_1	92							
156083	ATU018023	ATL8C1370:1474..498	gap2	ATCEA4S34715	92							
156084	ATU018024	ATL8C49490:638..458	gap2	ATCEA4S4789	92							
156085	ATU018025	ATL8C45518:823..324	gap2	ATCEA4S32440	92							
156086	ATU018026	ATL8C21472:100..1	gap2	ATCEA4C122303_2, ATCEA4C122303_1	92, 90							
156087	ATU018027	ATL8C31800:239..1	gap2	ATCEA4C1744_1	92							
156088	ATU018028	ATL8C22207:816..1569	gap2	ATCEA4C125508_1	92							
156089	ATU018029	ATL8C9675:2901..2662	gap2	ATCEA4S29822	92							
156090	ATU018030	ATL8S4168:1..348	gap2	ATCEA4C713_1	92							
156091	ATU018	ATL8C2	gap2	ATCEA4	92							

	031	0587:1..176		S4473								
156092	ATU018032	ATL8C45450:301..557	gap2	ATCEA4S34693	92							
156093	ATU018033	ATL8C45364:273..1	gap2	ATCEA4C16432_1	92							
156094	ATU018034	ATL8C18565:490..1186	gap2	ATCEA4C29896_1	92							
156095	ATU018035	ATL8C24680:1208..1479	gap2	ATCEA4S4373	92							
156096	ATU018036	ATL8S16424:426..584	gap2	ATCEA4C4283_1	92							
156097	ATU018037	ATL8S5855:596..509	gap2	ATCEA4C764_1	92							
156098	ATU018038	ATL8C14389:1297..1496	gap2	ATCEA4S11759	92							
156099	ATU018039	ATL8S1851:208..5	gap2	ATCEA4S958	92							
156100	ATU018040	ATL8C44479:402..668	gap2	ATCEA4C7375_1	92							
156101	ATU018041	ATL8C14412:329..1	gap2	ATCEA4C40612_1, ATCEA4S12428	92, 87							
156102	ATU018042	ATL8C49356:1..187	gap2	ATCEA4S36294	92							
156103	ATU018	ATL8C1	gap2	ATCEA4	92							

	043	7562:1736..1302		C11912 5_1								
156104	ATU018044	ATL8C2512:916..539	gap2	ATCEA4S25858, ATCEA4S18511	92, 88							
156105	ATU018045	ATL8C17037:271..1005	gap2	ATCEA4S35753, ATCEA4C24897 1	92, 88							
156106	ATU018046	ATL8C8093:991..340	gap2	ATCEA4C127735_1, ATCEA4S28455	92, 89							
156107	ATU018047	ATL8C13675:372..94	gap2	ATCEA4S31872	92							
156108	ATU018048	ATL8C13058:342..704	gap2	ATCEA4C9438_1, ATCEA4S30894	92, 91							
156109	ATU018049	ATL8C26990:480..1	gap2	ATCEA4S7570	92							
156110	ATU018050	ATL8C33042:809..537	gap2	ATCEA4S1727	92							
156111	ATU018051	ATL8C21873:1786..1266	gap2	ATCEA4C118522_1	92							
156112	ATU018052	ATL8C49607:153..1	gap2	ATCEA4C21346 _1	92							
156113	ATU018053	ATL8C31588:1..536	gap2	ATCEA4S33993,	92, 87							

				ATCEA4S30630								
156114	ATU018054	ATL8C1501:1819..1264	gap2	ATCEA4C26138_1	92							
156115	ATU018055	ATL8S1811:141..1	gap2	ATCEA4S30212	92							
156116	ATU018056	ATL8C45145:1396..1636	gap2	ATCEA4S26351	92							
156117	ATU018057	ATL8C12146:5522..5230	gap2	ATCEA4S25907	92							
156118	ATU018058	ATL8C49233:833..1397	gap2	ATCEA4C86807_1	92							
156119	ATU018059	ATL8C14362:1..221	gap2	ATCEA4S28265	92							
156120	ATU018060	ATL8C10865:882..1178	gap2	ATCEA4S35412	92							
156121	ATU018061	ATL8C3055:753..1	gap2	ATCEA4C27995_1, ATCEA4C29985_1	92, 82							
156122	ATU018062	ATL8S18006:395..550	gap2	ATCEA4S11934	92							
156123	ATU018063	ATL8S14021:1..461	gap2	ATCEA4C23999_1	92							
156124	ATU018064	ATL8C49010:348..67	gap2	ATCEA4S31503	92							

		3										
156125	ATU018065	ATL8C22808:7094..6740	gap2	ATCEA4S178	92							
156126	ATU018066	ATL8C16220:237..1	gap2	ATCEA4C9955_1	92							
156127	ATU018067	ATL8C22667:851..989	gap2	ATCEA4S2837	92							
156128	ATU018068	ATL8C45112:617..835	gap2	ATCEA4S5844	92							
156129	ATU018069	ATL8S27324:184..1	gap2	ATCEA4S3730, ATCEA4C23260_2	92, 87							
156130	ATU018070	ATL8C35126:902..393	gap2	ATCEA4S16186	92							
156131	ATU018071	ATL8C2975:1027..1165	gap2	ATCEA4S30593	92							
156132	ATU018072	ATL8C33699:511..168	gap2	ATCEA4S7	92							
156133	ATU018073	ATL8C27045:1482..1630	gap2	ATCEA4S12344	92							
156134	ATU018074	ATL8C41002:377..4170	gap2	ATCEA4S3937, ATCEA4S179	91, 88			g4038066, g4773910, g4773919	100, 46, 38	102, 200, 870	0.0098, 1.6e-08, 6.9e-78	(AC005897) hypothetical protein [Arabi

												dopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
156135	ATU018075	ATL8C13230:774..1	gap2	ATCEA4C1977_1	92							
156136	ATU018076	ATL8C16531:1..546	gap2	ATCEA4C2108_1, ATCEA4S32987, ATCEA4C2108_6	92, 90, 84							
156137	ATU018077	ATL8S24504:1..569	gap2	ATCEA4S13087, ATCEA4S30114, ATCEA4C21468	92, 91, 91, 89							

				_1, ATCEA4 C68656 _1								
156138	ATU018 078	ATL8C2 202:43 8..183	gap2	ATCEA4 S5486	92							
156139	ATU018 079	ATL8C4 3638:1 143..1 631	gap2	ATCEA4 C9480_ 1, ATCEA4 S35811	92, 92							
156140	ATU018 080	ATL8C2 4807:1 982..2 320	gap2	ATCEA4 S13711	92							
156141	ATU018 081	ATL8C1 0490:1 047..6 74	gap2	ATCEA4 S344	92							
156142	ATU018 082	ATL8S1 7729:2 58..45 8	gap2	ATCEA4 S4642	92							
156143	ATU018 083	ATL8C2 2626:4 53..19 8	gap2	ATCEA4 S34138	92							
156144	ATU018 084	ATL8C2 6641:6 93..75 5	gap2	ATCEA4 C73529 _1	92							
156145	ATU018 085	ATL8C4 5046:1 55..1	gap2	ATCEA4 S126	92							
156146	ATU018 086	ATL8C4 4071:9 10..98 9	gap2	ATCEA4 C2088_ 3, ATCEA4 C2088_ 1	92, 91							
156147	ATU018 087	ATL8S1 7610:1 54..63	gap2	ATCEA4 S18184	92							

156148	ATU018088	ATL8C26137:870..498	gap2	ATCEA4S34604	92							
156149	ATU018089	ATL8C35193:1056..1306	gap2	ATCEA4S4358	92							
156150	ATU018090	ATL8C22584:1599..1684	gap2	ATCEA4S34096	92							
156151	ATU018091	ATL8C29798:1005..933	gap2	ATCEA4S4124	92							
156152	ATU018092	ATL8C31858:2686..2462	gap2	ATCEA4S13981	92							
156153	ATU018093	ATL8C1430:4234..3879	gap2	ATCEA4S178	92							
156154	ATU018094	ATL8C22572:1028..1308	gap2	ATCEA4S590	92							
156155	ATU018095	ATL8C28932:1..96	gap2	ATCEA4S26	92							
156156	ATU018096	ATL8C13437:1751..2150	gap2	ATCEA4C1210_1, ATCEA4S13524	92, 91							
156157	ATU018097	ATL8C35326:843..528	gap2	ATCEA4S24064	92							
156158	ATU018098	ATL8C44872:1348..1599	gap2	ATCEA4C38640_1	92							

156159	ATU018099	ATL8C48341:1..439	gap2	ATCEA4C78636_1	92							
156160	ATU018100	ATL8C44838:1713..1823	gap2	ATCEA4S25403	92							
156161	ATU018101	ATL8C22470:2096..1705	gap2	ATCEA4S34914	92							
156162	ATU018102	ATL8C14254:4..617	gap2	ATCEA4S1945	92							
156163	ATU018103	ATL8C16620:3501..4616	gap2	ATCEA4C93357_1, ATCEA4C93357_3, ATCEA4S20908	92, 91, 86							
156164	ATU018104	ATL8C24883:4717..4063	gap2	ATCEA4S81	92							
156165	ATU018105	ATL8C48241:80..388	gap2	ATCEA4S866	92							
156166	ATU018106	ATL8C47249:812..66	gap2	ATCEA4C73961_1, ATCEA4S19922, ATCEA4S34624	92, 90, 90							
156167	ATU018107	ATL8C10490:1..276	gap2	ATCEA4S178	92							
156168	ATU018108	ATL8C9143:1195..1482	gap2	ATCEA4S5418	92							

156169	ATU018109	ATL8C15281:618..1344	gap2	ATCEA4C8051_1	92							
156170	ATU018110	ATL8C4824:1905..1487	gap2	ATCEA4S28991	92							
156171	ATU018111	ATL8C48238:303..407	gap2	ATCEA4C7935_1	92							
156172	ATU018112	ATL8S8776:1..336	gap2	ATCEA4C22991_1	92							
156173	ATU018113	ATL8C447:6547..6423	gap2	ATCEA4C3982_4	92							
156174	ATU018114	ATL8C31801:375..592	gap2	ATCEA4S30215	92							
156175	ATU018115	ATL8S30392:239..649	gap2	ATCEA4S7147, ATCEA4C13319_1	92, 88							
156176	ATU018116	ATL8C40408:772..1	gap2	ATCEA4C31434_1	92							
156177	ATU018117	ATL8C44772:672..143	gap2	ATCEA4S34382	92							
156178	ATU018118	ATL8C12222:425..613	gap2	ATCEA4S23837	92							
156179	ATU018119	ATL8C16256:67..470	gap2	ATCEA4C11834_1	92							
156180	ATU018120	ATL8C20329:2	gap2	ATCEA4S34521	92							

		079..2841										
156181	ATU0181121	ATL8C35413:75..158	gap2	ATCEA4C70061_1	92							
156182	ATU0181122	ATL8C13543:4021..3446	gap2	ATCEA4S29078	92							
156183	ATU0181123	ATL8C5372:2144..2355	gap2	ATCEA4C26582_2	92							
156184	ATU0181124	ATL8C43988:430..1065	gap2	ATCEA4C12863_1, ATCEA4S27746, ATCEA4S27731, ATCEA4S31725, ATCEA4S11236	92, 91, 91, 91, 85							
156185	ATU0181125	ATL8C29812:564..1	gap2	ATCEA4S28020	92							
156186	ATU0181126	ATL8C20314:1666..1537	gap2	ATCEA4C92967_1	92							
156187	ATU0181127	ATL8C24598:1449..1	gap2	ATCEA4C60723_1, ATCEA4C54677_1, ATCEA4C7002_1	92, 91, 88							
156188	ATU018	ATL8C4	gap2	ATCEA4	92							

	128	1319:7..277		S29866								
156189	ATU018129	ATL8C39191:563..714	gap2	ATCEA4S27119	92							
156190	ATU018130	ATL8C472:638..2537	gap2	ATCEA4S81	91			g4567296	100	2348	1.1e-186	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
156191	ATU018131	ATL8C18017:2439..1784	gap2	ATCEA4C14113_1	91			g2914704	100	414	0.011	(AC003974) unknown protein [Arabidopsis thaliana]
156192	ATU018132	ATL8C14196:1565..1681	gap2	ATCEA4S7856	92							
156193	ATU018133	ATL8C25595:620..748	gap2	ATCEA4C57159_1	92							
156194	ATU018134	ATL8C2161:40..676	gap2	ATCEA4C132798_1, ATCEA4S33881	92, 90							
156195	ATU018	ATL8C3	gap2	ATCEA4	92							

	135	9134:147..448		S32572								
156196	ATU018136	ATL8C40932:1..737	gap2	ATCEA4C1808_2	92							
156197	ATU018137	ATL8C34545:1..602	gap2	ATCEA4S32821, ATCEA4S19523, ATCEA4S19522	92, 91, 83							
156198	ATU018138	ATL8C28958:65..1	gap2	ATCEA4S28616	92							
156199	ATU018139	ATL8C31676:3141..38	gap2	ATCEA4S34794	91			g4314356, g4539460	100, 32	1015, 140	6.6e-108, 4.2e-12	(AC006340) putative anthocyanidin-3-glucoside rhamnosyltransferase [Arabidopsis thaliana]; (AL049500) putative protein [Arabidopsis thaliana]

156200	ATU018140	ATL8C44502:3886..3455	gap2	ATCEA4C118513_1	92							
156201	ATU018141	ATL8C35520:644..1263	gap2	ATCEA4C4816_1	92							
156202	ATU018142	ATL8C29821:1135..1506	gap2	ATCEA4S16210	92							
156203	ATU018143	ATL8C40502:306..511	gap2	ATCEA4C4701_1	92							
156204	ATU018144	ATL8C3261:5655..96	gap2	ATCEA4S81	91			g4567295, g4263544	100, 47	2214, 1835	1.5e-227, 5.9e-138	(AC006918) putative polpolyprotein [Arabidopsis thaliana]; (AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
156205	ATU018145	ATL8C44458:147..608	gap2	ATCEA4S29947	92							

156206	ATU018146	ATL8C35583:50..422	gap2	ATCEA4S26458	92							
156207	ATU018147	ATL8C9104:997..818	gap2	ATCEA4C42561_1	92							
156208	ATU018148	ATL8C8814:583..1080	gap2	ATCEA4S29746	92							
156209	ATU018149	ATL8C19750:969..161	gap2	ATCEA4C63709_1	92							
156210	ATU018150	ATL8C38941:2133..1997	gap2	ATCEA4S35221	92							
156211	ATU018151	ATL8C38929:1023..768	gap2	ATCEA4C87000_1	92							
156212	ATU018152	ATL8C46178:647..212	gap2	ATCEA4C81570_1	92							
156213	ATU018153	ATL8S20482:1..113	gap2	ATCEA4C64903_1	92							
156214	ATU018154	ATL8C8749:1..177	gap2	ATCEA4S344	92							
156215	ATU018155	ATL8C30530:787..359	gap2	ATCEA4S17350	92							
156216	ATU018156	ATL8S26237:1..70	gap2	ATCEA4C7951_1	92							
156217	ATU018157	ATL8C8714:87..347	gap2	ATCEA4S14576	92							
156218	ATU018158	ATL8C30122:8	gap2	ATCEA4C12023	92							

		69..420		6_1								
156219	ATU018159	ATL8C44210:337..141	gap2	ATCEA4S30017	92							
156220	ATU018160	ATL8C21755:390..1	gap2	ATCEA4S5993	92							
156221	ATU018161	ATL8C1696:2768..3491	gap2	ATCEA4S5466	92							
156222	ATU018162	ATL8C8710:1519..897	gap2	ATCEA4S29319	92							
156223	ATU018163	ATL8S7100:607..399	gap2	ATCEA4C4802_1	92							
156224	ATU018164	ATL8C38921:589..183	gap2	ATCEA4C26344_1	92							
156225	ATU018165	ATL8C32902:1033..896	gap2	ATCEA4S253	92							
156226	ATU018166	ATL8C33849:812..99	gap2	ATCEA4C19757_1	92							
156227	ATU018167	ATL8S16270:514..170	gap2	ATCEA4S20242	92							
156228	ATU018168	ATL8C44157:233..1	gap2	ATCEA4S12816	92							
156229	ATU018169	ATL8S16232:380..23	gap2	ATCEA4S10656	92							
156230	ATU018170	ATL8C35716:1055..1	gap2	ATCEA4S32515	92							

		460										
156231	ATU018171	ATL8C8659:633..324	gap2	ATCEA4S33240	92							
156232	ATU018172	ATL8C5732:926..778	gap2	ATCEA4C1858_1	92							
156233	ATU018173	ATL8S23054:57..1	gap2	ATCEA4C435_1	92							
156234	ATU018174	ATL8S15928:422..587	gap2	ATCEA4S699	92							
156235	ATU018175	ATL8C35725:309..1	gap2	ATCEA4S4717	92							
156236	ATU018176	ATL8S15832:183..1	gap2	ATCEA4S32390	92							
156237	ATU018177	ATL8C29073:888..675	gap2	ATCEA4S32104	92							
156238	ATU018178	ATL8C35734:1559..902	gap2	ATCEA4C59973_1	92							
156239	ATU018179	ATL8C1700:848..1231	gap2	ATCEA4S24067	92							
156240	ATU018180	ATL8C8636:518..382	gap2	ATCEA4S253	92							
156241	ATU018181	ATL8C13102:1004..641	gap2	ATCEA4C17709_1	92							
156242	ATU018182	ATL8C3575:748..673	gap2	ATCEA4S2958	92							
156243	ATU018183	ATL8C35765:6	gap2	ATCEA4S29982	92							

		11..918										
156244	ATU018184	ATL8C35769:1..1201	gap2	ATCEA4C1712_1	92							
156245	ATU018185	ATL8S15659:429..159	gap2	ATCEA4S36340	92							
156246	ATU018186	ATL8C35778:494..718	gap2	ATCEA4C7030_4, ATCEA4C7030_2	92, 85							
156247	ATU018187	ATL8C2631:1..457	gap2	ATCEA4S1291, ATCEA4C961_6, ATCEA4S14866, ATCEA4S4043, ATCEA4S14352	92, 87, 82, 82, 82							
156248	ATU018188	ATL8C31627:2309..1904	gap2	ATCEA4S30317	92							
156249	ATU018189	ATL8C8559:306..761	gap2	ATCEA4C6165_1	92							
156250	ATU018190	ATL8C30521:1078..1685	gap2	ATCEA4S16429, ATCEA4C696481	92, 82							
156251	ATU018191	ATL8C35866:192..964	gap2	ATCEA4S34323	92							

156252	ATU018192	ATL8C680:1381..1660	gap2	ATCEA4S17521	92							
156253	ATU018193	ATL8C18328:342..694	gap2	ATCEA4S3654	92							
156254	ATU018194	ATL8C29314:198..1	gap2	ATCEA4C4480_1	92							
156255	ATU018195	ATL8C35893:519..282	gap2	ATCEA4S27368	92							
156256	ATU018196	ATL8C2917:371..186	gap2	ATCEA4C28610_1	92							
156257	ATU018197	ATL8C38710:704..1	gap2	ATCEA4C1370_1	92							
156258	ATU018198	ATL8C10460:1776..1950	gap2	ATCEA4S11306	92							
156259	ATU018199	ATL8C33853:235..1	gap2	ATCEA4C117237_1	92							
156260	ATU018200	ATL8C38675:1023..1139	gap2	ATCEA4S35496,ATCEA4S12714	92, 86							
156261	ATU018201	ATL8C35908:500..65	gap2	ATCEA4C81323_2	92							
156262	ATU018202	ATL8S19024:1..201	gap2	ATCEA4C879_1	92							
156263	ATU018203	ATL8C8622:1029..1171	gap2	ATCEA4C28211_1	92							
156264	ATU018	ATL8C1	gap2	ATCEA4	92							

	204	2531:311..497		S4163								
156265	ATU018205	ATL8C46684:4053..7891	gap2	ATCEA4S178, ATCEA4S253	91, 87			g4263541, g4662646, g4309866	100, 62, 54	1217, 248, 1288	1.1e-109, 5.3e-07, 1.0e-128	(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AC006429) hypothetical protein [Arabidopsis thaliana]; (AC006527) putative transposase [Arabidopsis thaliana]
156266	ATU018206	ATL8C14856:269..587	gap2	ATCEA4S27306	92							
156267	ATU018207	ATL8C14795:2490..2555	gap2	ATCEA4C64837_1	92							

156268	ATU0182208	ATL8C43809:1..1348	gap2	ATCEA4C112522	92							
156269	ATU0182209	ATL8C21668:1978..1732	gap2	ATCEA4C61389_1	92							
156270	ATU0182210	ATL8S15123:84..251	gap2	ATCEA4S3619	92							
156271	ATU0182211	ATL8C32744:91..1	gap2	ATCEA4C12503_3	92							
156272	ATU0182212	ATL8C7042:816..606	gap2	ATCEA4S30791, ATCEA4S25592	92, 92							
156273	ATU0182213	ATL8C10442:602..535	gap2	ATCEA4S26144	92							
156274	ATU0182214	ATL8C48296:873..1028	gap2	ATCEA4S35013, ATCEA4S28487	92, 85							
156275	ATU0182215	ATL8C48299:2197..2685	gap2	ATCEA4S27154, ATCEA4S27009, ATCEA4C219_2	92, 91, 86							
156276	ATU0182216	ATL8C28666:216..1	gap2	ATCEA4C8610_1	92							
156277	ATU0182217	ATL8S72:1..123	gap2	ATCEA4C854671	92							
156278	ATU0182218	ATL8S22652:257..1	gap2	ATCEA4S34493,	92, 88							

				ATCEA4S2763								
156279	ATU018219	ATL8C43722:103..1	gap2	ATCEA4S34022	92							
156280	ATU018220	ATL8C7715:349..1	gap2	ATCEA4S34282, ATCEA4S33752	92, 86							
156281	ATU018221	ATL8C38443:620..864	gap2	ATCEA4C11242_2, ATCEA4C11242_1	92, 92							
156282	ATU018222	ATL8C31243:2015..2190	gap2	ATCEA4S17917	92							
156283	ATU018223	ATL8C15481:1..293	gap2	ATCEA4S17250	92							
156284	ATU018224	ATL8C27401:2024..2700	gap2	ATCEA4C18333_1	92							
156285	ATU018225	ATL8C17244:4072..4277	gap2	ATCEA4C611_1	92							
156286	ATU018226	ATL8C1831:703..1	gap2	ATCEA4C26013_1, ATCEA4C26013_2	92, 88							
156287	ATU018227	ATL8C38540:540..1087	gap2	ATCEA4C18117_1	92							
156288	ATU018228	ATL8C10393:1160..9	gap2	ATCEA4S178	92							

		11										
156289	ATU018229	ATL8C8240:602..778	gap2	ATCEA4S7936	92							
156290	ATU018230	ATL8C8226:1093..1540	gap2	ATCEA4S22699, ATCEA4S19706	92, 91							
156291	ATU018231	ATL8C38494:588..723	gap2	ATCEA4S27999	92							
156292	ATU018232	ATL8C8218:1..360	gap2	ATCEA4S4665	92							
156293	ATU018233	ATL8C43500:598..1	gap2	ATCEA4C918_1	92							
156294	ATU018234	ATL8C15044:1712..1908	gap2	ATCEA4S29552	92							
156295	ATU018235	ATL8C11667:129..521	gap2	ATCEA4S4993	92							
156296	ATU018236	ATL8C36527:1058..1287	gap2	ATCEA4C87186_1	92							
156297	ATU018237	ATL8C9936:694..1	gap2	ATCEA4C4910_1	92							
156298	ATU018238	ATL8C11983:1..146	gap2	ATCEA4C29510_1	92							
156299	ATU018239	ATL8C37371:607..212	gap2	ATCEA4C17148_1	92							
156300	ATU018240	ATL8C25547:722..53	gap2	ATCEA4S26669	92							

		3										
156301	ATU0182241	ATL8S30828:99..200	gap2	ATCEA4S35300, ATCEA4S36305	92, 85							
156302	ATU0182242	ATL8C1914:1084..194	gap2	ATCEA4S28799, ATCEA4S35614, ATCEA4C95853_1	92, 90, 87							
156303	ATU0182243	ATL8C42083:1..221	gap2	ATCEA4S7009, ATCEA4S3954	92, 89							
156304	ATU0182244	ATL8S14407:708..495	gap2	ATCEA4S27369	92							
156305	ATU0182245	ATL8C36872:59..818	gap2	ATCEA4C47951_1	92							
156306	ATU0182246	ATL8C10356:1940..1437	gap2	ATCEA4C4364_1	92							
156307	ATU0182247	ATL8C43323:1..140	gap2	ATCEA4S26947	92							
156308	ATU0182248	ATL8C11530:511..1070	gap2	ATCEA4C49539_1	92							
156309	ATU0182249	ATL8S13574:443..374	gap2	ATCEA4C42238_1	92							
156310	ATU0182250	ATL8C581:6442..349	gap2	ATCEA4S178, ATCEA4	91, 84			g4038066, g45672	100, 88	478, 1762	5.0e-23, 7.6e-	(AC005897) hypoth

		3		S81				96			162	etical protein [Arabidopsis thaliana]; (AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
156311	ATU018251	ATL8C43309:1289..916	gap2	ATCEA4S11151	92							
156312	ATU018252	ATL8C1809:143..464	gap2	ATCEA4S11778	92							
156313	ATU018253	ATL8C43160:1241..1002	gap2	ATCEA4C24457_1	92							
156314	ATU018254	ATL8C29231:390..47	gap2	ATCEA4C115833_1	92							
156315	ATU018255	ATL8S6823:285..215	gap2	ATCEA4C251_4	92							
156316	ATU018256	ATL8C43118:389..1	gap2	ATCEA4C6597_1	92							
156317	ATU018257	ATL8C29508:3522..2	gap2	ATCEA4C123371_1	92							

		991										
156318	ATU018258	ATL8C37000:87..241	gap2	ATCEA4S23371	92							
156319	ATU018259	ATL8C20105:1..394	gap2	ATCEA4S33481	92							
156320	ATU018260	ATL8S23850:59..292	gap2	ATCEA4S31988, ATCEA4C2971_1	92, 92							
156321	ATU018261	ATL8C7942:413..908	gap2	ATCEA4C112424_1	92							
156322	ATU018262	ATL8C29268:1..350	gap2	ATCEA4C89869_1	92							
156323	ATU018263	ATL8C47085:220..886	gap2	ATCEA4C2783_1, ATCEA4S80, ATCEA4S3770, ATCEA4S10427, ATCEA4S3779	92, 92, 89, 86, 84							
156324	ATU018264	ATL8S13541:1..134	gap2	ATCEA4C20185_1	92							
156325	ATU018265	ATL8C15407:146..814	gap2	ATCEA4S18843	92							
156326	ATU018266	ATL8S13873:159..1	gap2	ATCEA4C39847_1	92							
156327	ATU018267	ATL8C18043:1771..1	gap2	ATCEA4S560	92							

		877										
156328	ATU018268	ATL8C1234:3551..3793	gap2	ATCEA4S179	92							
156329	ATU018269	ATL8C31402:1706..2392	gap2	ATCEA4S28637	92							
156330	ATU018270	ATL8C43019:805..604	gap2	ATCEA4S4379	92							
156331	ATU018271	ATL8C27040:343..855	gap2	ATCEA4S16427, ATCEA4S26713	92, 89							
156332	ATU018272	ATL8C36405:631..239	gap2	ATCEA4S12105	92							
156333	ATU018273	ATL8C38150:1887..2204	gap2	ATCEA4S978	92							
156334	ATU018274	ATL8S10534:1..503	gap2	ATCEA4S34797, ATCEA4S32584	92, 85							
156335	ATU018275	ATL8C16733:717..1	gap2	ATCEA4C48855_1	92							
156336	ATU018276	ATL8C14792:1043..1444	gap2	ATCEA4S13054	92							
156337	ATU018277	ATL8C30242:1466..1222	gap2	ATCEA4S3385	92							
156338	ATU018278	ATL8C30139:2	gap2	ATCEA4C11954	92							

		479..2155		9_1								
156339	ATU018279	ATL8C37324:1679..1460	gap2	ATCEA4C1712_1	92							
156340	ATU018280	ATL8C37319:1016..811	gap2	ATCEA4S25900	92							
156341	ATU018281	ATL8C4296:423..846	gap2	ATCEA4C129921_1	92							
156342	ATU018282	ATL8C5648:487..190	gap2	ATCEA4C24778_2	92							
156343	ATU018283	ATL8C8662:755..629	gap2	ATCEA4C28971_1	92							
156344	ATU018284	ATL8C33653:803..1161	gap2	ATCEA4S25817, ATCEA4S16896	92, 87							
156345	ATU018285	ATL8C26466:1217..1002	gap2	ATCEA4C34968_1	92							
156346	ATU018286	ATL8C41407:8545..5021	gap2	ATCEA4S126, ATCEA4S179, ATCEA4S3937	91, 90, 88			g4263541, g4773910	100, 44	1187, 303	4.2e-118, 1.6e-27	(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AF147259)

												No definition line found [Arabidopsis thaliana]
156347	ATU018287	ATL8S21755:1..108	gap2	ATCEA4C29075_2, ATCEA4C29075_1, ATCEA4S12731	92, 92, 91							
156348	ATU018288	ATL8C28883:651..955	gap2	ATCEA4S34534	92							
156349	ATU018289	ATL8C10289:3260..2919	gap2	ATCEA4S36035	92							
156350	ATU018290	ATL8C21278:1388..1252	gap2	ATCEA4S10947	92							
156351	ATU018291	ATL8C13992:1074..1297	gap2	ATCEA4S12588, ATCEA4S12816	92, 90							
156352	ATU018292	ATL8C42892:1835..2077	gap2	ATCEA4S11712	92							
156353	ATU018293	ATL8C1074:1338..1758	gap2	ATCEA4C40831_1	92							
156354	ATU018294	ATL8C12663:3	gap2	ATCEA4S3610	92							

		46..679										
156355	ATU018295	ATL8C1796:635..268	gap2	ATCEA4S11603	92							
156356	ATU018296	ATL8C29248:441..1438	gap2	ATCEA4C840_1	92							
156357	ATU018297	ATL8C12634:829..565	gap2	ATCEA4S23967	92							
156358	ATU018298	ATL8C35657:322..1	gap2	ATCEA4C8307_1	92							
156359	ATU018299	ATL8C42823:459..761	gap2	ATCEA4C116136_1	92							
156360	ATU018300	ATL8C33885:1973..2166	gap2	ATCEA4C770_1	92							
156361	ATU018301	ATL8C30318:453..10	gap2	ATCEA4S33158, ATCEA4C1882_1	92, 92							
156362	ATU018302	ATL8C35730:2621..2260	gap2	ATCEA4S31809, ATCEA4S30199	92, 82							
156363	ATU018303	ATL8C2127:676..332	gap2	ATCEA4S7	92							
156364	ATU018304	ATL8C24314:1691..390	gap2	ATCEA4C1068_1, ATCEA4C2135_1	92, 90							

156365	ATU018305	ATL8C17840:812..545	gap2	ATCEA4C94142_1	92							
156366	ATU018306	ATL8C33535:982..1864	gap2	ATCEA4S23367, ATCEA4C88000_1	92, 83							
156367	ATU018307	ATL8C12530:357..1	gap2	ATCEA4C84462_1	92							
156368	ATU018308	ATL8C2783:1..349	gap2	ATCEA4S36283	92							
156369	ATU018309	ATL8S13214:93..1	gap2	ATCEA4S5216	92							
156370	ATU018310	ATL8C378:1193..1325	gap2	ATCEA4S23996	92							
156371	ATU018311	ATL8C23468:35..519	gap2	ATCEA4S35505, ATCEA4S32998, ATCEA4S27343	92, 87, 82							
156372	ATU018312	ATL8C14581:813..661	gap2	ATCEA4C7810_1	92							
156373	ATU018313	ATL8C39565:920..734	gap2	ATCEA4C44644_1	92							
156374	ATU018314	ATL8C37124:1..277	gap2	ATCEA4S31264	92							
156375	ATU018315	ATL8C20056:1	gap2	ATCEA4S2170	92							

		..135										
156376	ATU018316	ATL8C36816:503..661	gap2	ATCEA4C27669_1	92							
156377	ATU018317	ATL8C26539:1..214	gap2	ATCEA4C27177_1	92							
156378	ATU018318	ATL8C42412:1111..648	gap2	ATCEA4S12895	92							
156379	ATU018319	ATL8S17857:330..176	gap2	ATCEA4C25369_1	92							
156380	ATU018320	ATL8C17591:669..982	gap2	ATCEA4S5084	92							
156381	ATU018321	ATL8C41943:1..312	gap2	ATCEA4C144001_1	92							
156382	ATU018322	ATL8C16677:650..547	gap2	ATCEA4S5698	92							
156383	ATU018323	ATL8C21182:320..744	gap2	ATCEA4C46653_1	92							
156384	ATU018324	ATL8C7428:1..171	gap2	ATCEA4C99285_1	92							
156385	ATU018325	ATL8C37728:1664..1552	gap2	ATCEA4S30627	92							
156386	ATU018326	ATL8S12971:80..1	gap2	ATCEA4S35993	92							
156387	ATU018327	ATL8C45666:868..36	gap2	ATCEA4C116035_1	92							

		9										
156388	ATU0183 28	ATL8S19827:1..279	gap2	ATCEA4S33174	92							
156389	ATU0183 29	ATL8C16792:248..652	gap2	ATCEA4S12925	92							
156390	ATU0183 30	ATL8C26541:441..778	gap2	ATCEA4S3646	92							
156391	ATU0183 31	ATL8C45367:1062..1481	gap2	ATCEA4C361_1	92							
156392	ATU0183 32	ATL8C21115:792..1317	gap2	ATCEA4C5730_1	92							
156393	ATU0183 33	ATL8C42286:81..517	gap2	ATCEA4S33505	92							
156394	ATU0183 34	ATL8S12730:212..320	gap2	ATCEA4C123236_1	92							
156395	ATU0183 35	ATL8S19972:439..628	gap2	ATCEA4S25970	92							
156396	ATU0183 36	ATL8C45684:491..20	gap2	ATCEA4C52965_1	92							
156397	ATU0183 37	ATL8S2027:78..1	gap2	ATCEA4S35993	92							
156398	ATU0183 38	ATL8S2029:234..105	gap2	ATCEA4C18460_1	92							
156399	ATU0183 39	ATL8C20987:298..716	gap2	ATCEA4S4471	92							

156400	ATU018340	ATL8S19312:445..1	gap2	ATCEA4C5391_2	92							
156401	ATU018341	ATL8C42138:366..98	gap2	ATCEA4C31960_1	92							
156402	ATU018342	ATL8S12633:78..1	gap2	ATCEA4S35993	92							
156403	ATU018343	ATL8C20958:85..1	gap2	ATCEA4C9820_2	92							
156404	ATU018344	ATL8C46907:4245..3585	gap2	ATCEA4S32809, ATCEA4S31145	92, 89							
156405	ATU018345	ATL8S12609:40..463	gap2	ATCEA4C8190_1	92							
156406	ATU018346	ATL8C28593:1..281	gap2	ATCEA4S27416	92							
156407	ATU018347	ATL8C15879:259..1	gap2	ATCEA4C89169_1	92							
156408	ATU018348	ATL8C45783:1285..1145	gap2	ATCEA4S253	92							
156409	ATU018349	ATL8C45799:1117..1476	gap2	ATCEA4S1026	92							
156410	ATU018350	ATL8S212:1..96	gap2	ATCEA4S6215	92							
156411	ATU018351	ATL8C40858:213..1	gap2	ATCEA4C27041_1	92							
156412	ATU018352	ATL8C42130:1..80	gap2	ATCEA4S2239	92							
156413	ATU018	ATL8S1	gap2	ATCEA4	92							

	353	250:328..1		S23673								
156414	ATU018354	ATL8S21478:221..464	gap2	ATCEA4S11196	92							
156415	ATU018355	ATL8S216:598..88	gap2	ATCEA4C42345_1	92							
156416	ATU018356	ATL8C7863:1335..1729	gap2	ATCEA4C77739_1	92							
156417	ATU018357	ATL8C30990:1599..1196	gap2	ATCEA4S12925	92							
156418	ATU018358	ATL8C11548:311..561	gap2	ATCEA4C12391_1	92							
156419	ATU018359	ATL8S21652:543..254	gap2	ATCEA4S11213	92							
156420	ATU018360	ATL8S21846:125..51	gap2	ATCEA4C68555_1	92							
156421	ATU018361	ATL8C46062:1903..1671	gap2	ATCEA4C118726_1	92							
156422	ATU018362	ATL8C46074:619..184	gap2	ATCEA4S33502	92							
156423	ATU018363	ATL8C46143:3451..2941	gap2	ATCEA4C109110_1	92							
156424	ATU018364	ATL8S22497:1..290	gap2	ATCEA4S25984	92							
156425	ATU018	ATL8C4	gap2	ATCEA4	92							

	365	6224:1..207		C48354_1								
156426	ATU018366	ATL8S2311:398..1	gap2	ATCEA4S10802	92							
156427	ATU018367	ATL8S2332:123..526	gap2	ATCEA4S7377	92							
156428	ATU018368	ATL8S23369:107..184	gap2	ATCEA4S29075	92							
156429	ATU018369	ATL8S23378:1..282	gap2	ATCEA4S1363	92							
156430	ATU018370	ATL8S2375:125..379	gap2	ATCEA4S35770	92							
156431	ATU018371	ATL8S24003:564..38	gap2	ATCEA4C13207_1	92							
156432	ATU018372	ATL8C41786:647..1039	gap2	ATCEA4C12948_1	92							
156433	ATU018373	ATL8C41773:10335..10100	gap2	ATCEA4S27391	92							
156434	ATU018374	ATL8C14591:1..176	gap2	ATCEA4C65824_1	92							
156435	ATU018375	ATL8C36895:1726..1194	gap2	ATCEA4C61758_1	92							
156436	ATU018376	ATL8S24665:40..395	gap2	ATCEA4S178	92							
156437	ATU018377	ATL8S2544:1..429	gap2	ATCEA4C3922_1	92							
156438	ATU018378	ATL8S26091:2	gap2	ATCEA4S26926	92							

		71..378										
156439	ATU018379	ATL8S26115:207..1	gap2	ATCEA4S12766	92							
156440	ATU018380	ATL8C29676:4697..4501	gap2	ATCEA4S27232	92							
156441	ATU018381	ATL8C49696:9623..8277	gap2	ATCEA4S5256, ATCEA4C3658_1	91, 90			g3738335	100	841	4.8e-91	(AC005170) unknown protein [Arabidopsis thaliana]
156442	ATU018382	ATL8C43141:1..592	gap2	ATCEA4C20516_1, ATCEA4S19540	92, 88							
156443	ATU018383	ATL8S26321:264..155	gap2	ATCEA4S33108	92							
156444	ATU018384	ATL8S26663:64..1	gap2	ATCEA4S4156	92							
156445	ATU018385	ATL8S27927:440..228	gap2	ATCEA4S32800	92							
156446	ATU018386	ATL8C38854:669..480	gap2	ATCEA4C4871_1	92							
156447	ATU018387	ATL8C2568:1..235	gap2	ATCEA4S4723	92							
156448	ATU018388	ATL8S28014:1	gap2	ATCEA4C98140	92							

		..301		1								
156449	ATU018389	ATL8S28351:530..1	gap2	ATCEA4C19660_1	92							
156450	ATU018390	ATL8C46904:136..1	gap2	ATCEA4S2424	92							
156451	ATU018391	ATL8C46972:215..351	gap2	ATCEA4S253	92							
156452	ATU018392	ATL8S29524:224..484	gap2	ATCEA4S3625	92							
156453	ATU018393	ATL8S29979:1..199	gap2	ATCEA4S1969, ATCEA4S22060	92, 85							
156454	ATU018394	ATL8S30412:1..261	gap2	ATCEA4S34690	92							
156455	ATU018395	ATL8S30779:267..1	gap2	ATCEA4S11492	92							
156456	ATU018396	ATL8C13802:1104..580	gap2	ATCEA4S33699, ATCEA4C38741_1	92, 83							
156457	ATU018397	ATL8S3377:1..279	gap2	ATCEA4C99289_1	92							
156458	ATU018398	ATL8S3525:563..1	gap2	ATCEA4C353_1	92							
156459	ATU018399	ATL8C42306:869..962	gap2	ATCEA4C4584_1	92							
156460	ATU018400	ATL8S3563:162..1	gap2	ATCEA4C99444_1	92							

156461	ATU018401	ATL8S3599:344..577	gap2	ATCEA4S26169	92							
156462	ATU018402	ATL8C4746:1..497	gap2	ATCEA4C120090_1	92							
156463	ATU018403	ATL8C4555:628..406	gap2	ATCEA4C18641_1	92							
156464	ATU018404	ATL8C15920:201..129	gap2	ATCEA4C20173_1	92							
156465	ATU018405	ATL8S11605:75..483	gap2	ATCEA4C13187_1	92							
156466	ATU018406	ATL8S4130:597..1	gap2	ATCEA4C27799_1	92							
156467	ATU018407	ATL8C36795:176..590	gap2	ATCEA4C55264_1	92							
156468	ATU018408	ATL8S1154:1..75	gap2	ATCEA4S11931	92							
156469	ATU018409	ATL8C47574:1..232	gap2	ATCEA4S32776	92							
156470	ATU018410	ATL8S4501:225..356	gap2	ATCEA4S4596	92							
156471	ATU018411	ATL8C25709:272..496	gap2	ATCEA4S20082	92							
156472	ATU018412	ATL8C1368:510..1	gap2	ATCEA4C6129_1	92							
156473	ATU018413	ATL8C47716:289..72	gap2	ATCEA4S30415	92							
156474	ATU018414	ATL8S624:1..	gap2	ATCEA4S32622	92							

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156475	ATU018415	ATL8S634:450..152	gap2	ATCEA4S178	92							
156476	ATU018416	ATL8C20307:585..834	gap2	ATCEA4S14092, ATCEA4S22633	92, 83							
156477	ATU018417	ATL8C15502:1686..2608	gap2	ATCEA4C22441_1, ATCEA4S23854	92; 86							
156478	ATU018418	ATL8S2788:76..1	gap2	ATCEA4S27835, ATCEA4S27522, ATCEA4C1190_1	92, 92, 92							
156479	ATU018419	ATL8C17287:113..1	gap2	ATCEA4S20925	92							
156480	ATU018420	ATL8S649:247..121	gap2	ATCEA4S1449	92							
156481	ATU018421	ATL8S6667:121..444	gap2	ATCEA4S13106	92							
156482	ATU018422	ATL8C24192:277..650	gap2	ATCEA4S344	92							
156483	ATU018423	ATL8C47914:557..391	gap2	ATCEA4C105795_1	92							
156484	ATU018424	ATL8S717:414..608	gap2	ATCEA4C75945_1	92							
156485	ATU018	ATL8S7	gap2	ATCEA4	92							

	425	273:1..103		S1600								
156486	ATU018426	ATL8C6660:2072..1955	gap2	ATCEA4S26104	92							
156487	ATU018427	ATL8S7478:448..1	gap2	ATCEA4C50983_1	92							
156488	ATU018428	ATL8C47965:1743..1652	gap2	ATCEA4S16009	92							
156489	ATU018429	ATL8S7763:1..321	gap2	ATCEA4S3305	92							
156490	ATU018430	ATL8C48015:2539..2010	gap2	ATCEA4S3008	92							
156491	ATU018431	ATL8C48058:1..179	gap2	ATCEA4S30348	92							
156492	ATU018432	ATL8C48984:550..478	gap2	ATCEA4C33062_1	92							
156493	ATU018433	ATL8S2408:409..605	gap2	ATCEA4C45355_1	92							
156494	ATU018434	ATL8S9115:255..500	gap2	ATCEA4S29518	92							
156495	ATU018435	ATL8C40683:1055..720	gap2	ATCEA4S12837	92							
156496	ATU018436	ATL8C48148:144..1	gap2	ATCEA4S3580	92							
156497	ATU018437	ATL8C31683:483..607	gap2	ATCEA4C633_1	92							

156498	ATU018438	ATL8C40174:720..334	gap2	ATCEA4S27471	92							
156499	ATU018439	ATL8S9175:1..111	gap2	ATCEA4S7838	92							
156500	ATU018440	ATL8C208:1950..1507	gap2	ATCEA4S25824	92							
156501	ATU018441	ATL8C19174:5032..4691	gap2	ATCEA4S25855, ATCEA4S18507	92, 89							
156502	ATU018442	ATL8C25135:488..55	gap2	ATCEA4S24730, ATCEA4S35012	92, 87							
156503	ATU018443	ATL8S9257:152..345	gap2	ATCEA4S2449	92							
156504	ATU018444	ATL8C10696:497..760	gap2	ATCEA4S13604	92							
156505	ATU018445	ATL8C48160:1473..1780	gap2	ATCEA4C8253_1	92							
156506	ATU018446	ATL8C48167:337..753	gap2	ATCEA4S17776	92							
156507	ATU018447	ATL8S9839:464..169	gap2	ATCEA4S11732	92							
156508	ATU018448	ATL8C6505:2034..2681	gap2	ATCEA4C12614_1	92							
156509	ATU018	ATL8C1	gap2	ATCEA4	92							

	449	9778:1273..808		C69902_1								
156510	ATU018450	ATL8C20753:1..231	gap2	ATCEA4S32791	92							
156511	ATU018451	ATL8C6463:1347..1029	gap2	ATCEA4S13685	92							
156512	ATU018452	ATL8C6604:358..454	gap2	ATCEA4C8919_1	92							
156513	ATU018453	ATL8C2851:2126..1927	gap2	ATCEA4S26598	92							
156514	ATU018454	ATL8C32192:849..1476	gap2	ATCEA4C115555_1, ATCEA4S34263	92, 84							
156515	ATU018455	ATL8S10799:79..1	gap2	ATCEA4S35993	92							
156516	ATU018456	ATL8C40001:891..956	gap2	ATCEA4S27399	92							
156517	ATU018457	ATL8C6001:505..381	gap2	ATCEA4S3677	92							
156518	ATU018458	ATL8S14655:49..181	gap2	ATCEA4C41779_1	92							
156519	ATU018459	ATL8C5979:458..159	gap2	ATCEA4S18424	92							
156520	ATU018460	ATL8C11346:1..148	gap2	ATCEA4S1109	92							
156521	ATU018461	ATL8C4602:481..240	gap2	ATCEA4C933_1	92							

156522	ATU018462	ATL8C19705:853..516	gap2	ATCEA4S16699	92							
156523	ATU018463	ATL8C2668:3485..3195	gap2	ATCEA4S178	92							
156524	ATU018464	ATL8S9474:114..377	gap2	ATCEA4C13167_1	92							
156525	ATU018465	ATL8C41848:706..1056	gap2	ATCEA4C79207_1, ATCEA4S6511	92, 84							
156526	ATU018466	ATL8C5769:483..683	gap2	ATCEA4S31558	92							
156527	ATU018467	ATL8C34545:1266..1380	gap2	ATCEA4S8436	92							
156528	ATU018468	ATL8C36947:1014..1277	gap2	ATCEA4C10217_1	92							
156529	ATU018469	ATL8C19617:1..105	gap2	ATCEA4C34594_1	92							
156530	ATU018470	ATL8C34548:106..497	gap2	ATCEA4S12245	92							
156531	ATU018471	ATL8S12540:488..342	gap2	ATCEA4C114130_1	92							
156532	ATU018472	ATL8C34971:1287..2133	gap2	ATCEA4S24718, ATCEA4C101243_1	92, 89							

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156533	ATU018473	ATL8C19480:551..1	gap2	ATCEA4S7594	92							
156534	ATU018474	ATL8C5566:1..165	gap2	ATCEA4S13054	92							
156535	ATU018475	ATL8S193:50..699	gap2	ATCEA4C64511_1	92							
156536	ATU018476	ATL8C552:846..718	gap2	ATCEA4C34415_1	92							
156537	ATU018477	ATL8C2813:1590..1384	gap2	ATCEA4C35034_1	92							
156538	ATU018478	ATL8C18923:656..340	gap2	ATCEA4S26005, ATCEA4S34442, ATCEA4S16355	92, 87, 85							
156539	ATU018479	ATL8C33691:377..1	gap2	ATCEA4C38925_1	92							
156540	ATU018480	ATL8C23495:373..1	gap2	ATCEA4C143599_1	92							
156541	ATU018481	ATL8C23476:1..401	gap2	ATCEA4C99124_1	92							
156542	ATU018482	ATL8C34626:286..683	gap2	ATCEA4C30889_1	92							
156543	ATU018483	ATL8C19467:59..404	gap2	ATCEA4S7	92							
156544	ATU018484	ATL8C24330:1337..1626	gap2	ATCEA4S4513	92							

156545	ATU018485	ATL8C16953:155..355	gap2	ATCEA4S31549	92							
156546	ATU018486	ATL8C3466:1398..1508	gap2	ATCEA4S25403	92							
156547	ATU018487	ATL8C64:185..1127	gap2	ATCEA4S31907, ATCEA4C28346_2	92, 82							
156548	ATU018488	ATL8S1024:497..192	gap2	ATCEA4S26027	92							
156549	ATU018489	ATL8C11151:284..525	gap2	ATCEA4C23009_1, ATCEA4S30842	92, 89							
156550	ATU018490	ATL8C11155:381..40	gap2	ATCEA4C2602_1	92							
156551	ATU018491	ATL8S10423:307..1	gap2	ATCEA4S29979, ATCEA4C132667_1	92, 86							
156552	ATU018492	ATL8C5344:218..1	gap2	ATCEA4S274	92							
156553	ATU018493	ATL8C11351:1387..1909	gap2	ATCEA4S34749	92							
156554	ATU018494	ATL8C3229:716..846	gap2	ATCEA4S35759	92							
156555	ATU018495	ATL8C5318:2660..22	gap2	ATCEA4S20251	92							

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156556	ATU018496	ATL8C30523:82..1	gap2	ATCEA4S31005	92							
156557	ATU018497	ATL8C2063:1769..1081	gap2	ATCEA4S34189	92							
156558	ATU018498	ATL8C19268:802..401	gap2	ATCEA4S11738	92							
156559	ATU018499	ATL8C19248:617..462	gap2	ATCEA4S28476	92							
156560	ATU018500	ATL8S24021:566..340	gap2	ATCEA4C98132_1	92							
156561	ATU018501	ATL8C15972:910..1086	gap2	ATCEA4C14747_1	92							
156562	ATU018502	ATL8C2438:380..779	gap2	ATCEA4S17384	92							
156563	ATU018503	ATL8C514:913..1083	gap2	ATCEA4S2535	92							
156564	ATU018504	ATL8S5930:1..135	gap2	ATCEA4C6438_1	92							
156565	ATU018505	ATL8C30844:378..791	gap2	ATCEA4S34916	92							
156566	ATU018506	ATL8C25032:1..803	gap2	ATCEA4C25250_1	91			g4914378	100	547	5.1e-58	(AC007584) hypothetical protein [Arabi

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156567	ATU018507	ATL8C32234:951..643	gap2	ATCEA4S16741	92							
156568	ATU018508	ATL8C8004:295..1	gap2	ATCEA4C125609_2, ATCEA4S28820, ATCEA4S27553	92, 88, 82							
156569	ATU018509	ATL8C7298:570..467	gap2	ATCEA4C2103_1, ATCEA4S1200	92, 88							
156570	ATU018510	ATL8C46677:1435..1675	gap2	ATCEA4C95697_1	92							
156571	ATU018511	ATL8C31798:531..420	gap2	ATCEA4C4176_1	92							
156572	ATU018512	ATL8C20606:1..271	gap2	ATCEA4C132107_1	92							
156573	ATU018513	ATL8C19216:1..390	gap2	ATCEA4S28654	92							
156574	ATU018514	ATL8C192:2533..1989	gap2	ATCEA4S33159	92							
156575	ATU018515	ATL8C25858:45..480	gap2	ATCEA4C10968_3	92							
156576	ATU018516	ATL8C49928:691..89	gap2	ATCEA4S32126	92							

		4										
156577	ATU018517	ATL8S2483:1..427	gap2	ATCEA4S26320, ATCEA4S22440	92, 85							
156578	ATU018518	ATL8C42898:262..1	gap2	ATCEA4C2087_1, ATCEA4S1152	92, 88							
156579	ATU018519	ATL8C23225:244..1	gap2	ATCEA4S11695	92							
156580	ATU018520	ATL8C26043:2424..2040	gap2	ATCEA4S3028	92							
156581	ATU018521	ATL8C49805:1326..909	gap2	ATCEA4S31314	92							
156582	ATU018522	ATL8C39770:1..165	gap2	ATCEA4S10777	92							
156583	ATU018523	ATL8C28313:659..114	gap2	ATCEA4S35937	92							
156584	ATU018524	ATL8C40596:786..847	gap2	ATCEA4S20826	92							
156585	ATU018525	ATL8C2320:2614..2479	gap2	ATCEA4S1375	92							
156586	ATU018526	ATL8C32082:107..473	gap2	ATCEA4S10880	92							
156587	ATU018527	ATL8C24896:1..107	gap2	ATCEA4C117457_1,	92, 83							

				ATCEA4S23985								
156588	ATU018528	ATL8C49724:17837..17428	gap2	ATCEA4S4364	92							
156589	ATU018529	ATL8C12552:736..1398	gap2	ATCEA4S1839, ATCEA4S24767	92, 83							
156590	ATU018530	ATL8C26073:631..1225	gap2	ATCEA4C1815_1	91	ATL8C26073:646..843	0.94	g3883128	99	598	2.2e-11	(AF082302) arabinogalactan-protein [Arabidopsis thaliana]
156591	ATU018531	ATL8C973:1279..162	gap2	ATCEA4C3386_1	91	ATL8C973:1279..162	0.94	g1173286	99	646	5.8e-63	40S RIBOSOMAL PROTEIN S9 [Rattus norvegicus]
156592	ATU018532	ATL8C26429:482..1150	gap2	ATCEA4S35165, ATCEA4S14360	91, 85	ATL8C26429:482..1144	0.92	g2262176	99	201	7.1e-16	(AC002329) putative RING zinc-finger protein [Arabidopsis thaliana]
156593	ATU018	ATL8C3	gap2	ATCEA4	91	ATL8C3	0.88	g22448	99	804	5.1e-	(Z9733

	533	7803:1316..422		C32268_1		7803:1147..631		12			56	6) auxin-responsive protein IAA1 [Arabidopsis thaliana]
156594	ATU018534	ATL8C30485:340..1928	gap2	ATCEA4C960_1	91	ATL8C30485:340..1765	0.78	g2668744	99	655	3.4e-49	(AF034946) ubiquitin conjugating enzyme [Zea mays]
156595	ATU018535	ATL8C49230:483..2758	gap2	ATCEA4C53257_1	91	ATL8C49230:483..2627	0.50	g1653444	99	218	9.6e-20	(D90913) hypothetical protein [Synechocystis sp.]
156596	ATU018536	ATL8S21761:455..1	gap2	ATCEA4S36001, ATCEA4C70284_2, ATCEA4C70284_1, ATCEA4S35611	91, 91, 87, 86	ATL8S21761:380..227	0.49	g543565	99	225	2.2e-16	hypothetical 10.0K protein - Zinnia elegans [Zinnia elegans]
156597	ATU018537	ATL8C16972:1..1110	gap2	ATCEA4C23096_2	91	ATL8C16972:136..911	0.44	g1663551	99	183	6.0e-15	(U55810) disease

												resistance protein homolog [Glycine max]
156598	ATU018538	ATL8C38044:1913..808	gap2	ATCEA4S29589	91			g4895235	99	359	2.7e-18	(AC007659) putative symbiosis-related protein [Arabidopsis thaliana]
156599	ATU018539	ATL8C24198:1417..814	gap2	ATCEA4C164898_1	91			g3123295	99	230	6.4e-21	CALMODULIN-RELATED PROTEIN 2, TOUCH-INDUCED [Arabidopsis thaliana]
156600	ATU018540	ATL8C18386:611..1	gap2	ATCEA4S30420	91			g3810602	99	480	3.4e-46	(AC005398) PR-1-like protein [Arabidopsis thalia

												na]
156601	ATU018541	ATL8C10843:1853..976	gap2	ATCEA4C54005_1	91			g3953468	99	673	9.4e-29	(AC002328) F20N2.13 [Arabidopsis thaliana]
156602	ATU018542	ATL8C33601:413..17	gap2	ATCEA4S35638	91			g3395427	99	548	3.4e-38	(AC004683) unknown protein [Arabidopsis thaliana]
156603	ATU018543	ATL8C2510:1154..757	gap2	ATCEA4S8426	91	ATL8C2510:1058..757	0.86	g3892702	98	584	2.1e-37	(AL033545) extensin like protein [Arabidopsis thaliana]
156604	ATU018544	ATL8C3269:1401..394	gap2	ATCEA4C40605_1	91	ATL8C3269:1319..394	0.86	g4454009	98	1345	4.7e-87	(AL035396) putative protein [Arabidopsis thaliana]
156605	ATU018545	ATL8C515:5895..2062	gap2	ATCEA4C17000_1, ATCEA4	91, 88	ATL8C515:5092..2068	0.70	g4455192	96	1409	2.8e-132	(AL035440) putative

				C87431_1								protein [Arabidopsis thaliana]
156606	ATU018546	ATL8C14052:2756..1	gap2	ATCEA4S3951	91	ATL8C14052:1388..18	0.97	g2642444	95	2204	2.5e-217	(AC002391) putative cytochrome P450 [Arabidopsis thaliana]
156607	ATU018547	ATL8C44722:1557..60	gap2	ATCEA4S26951, ATCEA4C118315_1	91, 83	ATL8C44722:916..319	0.88	g3128184	95	990	7.9e-107	(AC004521) unknown protein [Arabidopsis thaliana]
156608	ATU018548	ATL8C13055:3146..1	gap2	ATCEA4S712, ATCEA4C6766_1	91, 89	ATL8C13055:2818..209	0.54	g3668081	94	1114	4.3e-115	(AC004667) putative peptidase [Arabidopsis thaliana]
156609	ATU018549	ATL8C21346:1952..1	gap2	ATCEA4S23481, ATCEA4S5096, ATCEA4S3099, ATCEA4	91, 90, 90, 89, 89, 89, 88, 86,	ATL8C21346:1803..35	0.71	g1617013, g4836934, g4204303	93, 52, 36	623, 134, 190	1.1e-36, 9.0e-13, 3.2e-18	(Y07745) histone H2B like protein [Arabi

				C862_1, ATCEA4S3406, ATCEA4S2980, ATCEA4S2666, ATCEA4S3401, ATCEA4S25918, ATCEA4S6959	83, 83							dopsis thaliana]; (AC006085) Hypothetical protein [Arabidopsis thaliana]; (AC003027) lcl|prt_seq No definition line found [Arabidopsis thaliana]
156610	ATU018550	ATL8C26098:1..489	gap2	ATCEA4C33330_1	91	ATL8C26098:70..489	0.55	g4587561	92	624	4.7e-64	(AC006577) F15I1.28 [Arabidopsis thaliana]
156611	ATU018551	ATL8C43193:1..1646	gap2	ATCEA4S35815, ATCEA4S33133	91, 90	ATL8C43193:640..1631	0.88	g4585908, g2384863	91, 82	351, 174	4.3e-27, 2.2e-14	(AC006298) putative lysosomal acid lipase [Arabidopsis thalia

												na]; (AF022976) Similar to lipase; R11G11.14 [Caenorhabditis elegans]
156612	ATU018552	ATL8C3233:4711..2114	gap2	ATCEA4S798, ATCEA4S20138	91, 85	ATL8C3233:4563..2123	0.61	g2160156	90	3178	0.0	(AC000132) Strong similarity to S. pombe leucyl-tRNA synthetase (gb|Z73100). [Arabidopsis thaliana]
156613	ATU018553	ATL8C7428:919..42	gap2	ATCEA4C12443_1	91	ATL8C7428:820..246	0.95	g4164473	89	112	3.5e-10	(AF061157) negatively light-regulated protein [Vernicia fordii]
156614	ATU018	ATL8C4	gap2	ATCEA4	91	ATL8C4	0.99	g36953	88	1530	6.1e-	(AF096

	554	1048:674..2207		S11082		1048:818..2196		96			109	372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
156615	ATU018555	ATL8C26948:944..42	gap2	ATCEA4C98670_1, ATCEA4C32555_1	91, 89	ATL8C26948:860..277	0.86	g2464872	88	642	8.1e-46	(Z99707) hypothetical protein [Arabidopsis thaliana]
156616	ATU018556	ATL8C2093:5..874	gap2	ATCEA4C38083_1, ATCEA4S7770, ATCEA4S12654	91, 89, 84	ATL8C2093:37..813	0.82	g2739046	88	402	6.1e-46	(AF024652) polyphosphoinositide binding protein Ssh2p [Glycine max]
156617	ATU018	ATL8C9	gap2	ATCEA4	91, 91	ATL8C9	0.48	g22528	88	46	0.042	(AF013

	557	801:1..653		S4496, ATCEA4C41156_1		801:246..638		66				294) contains region of similarity to SYT [Arabidopsis thaliana]
156618	ATU018558	ATL8C13207:831..1	gap2	ATCEA4S32765	91	ATL8C13207:831..34	0.92	g2829898	87	402	1.0e-40	(AC002311) Hypothetical protein [Arabidopsis thaliana]
156619	ATU018559	ATL8C28667:740..1	gap2	ATCEA4C57587_1, ATCEA4S8524	91, 82	ATL8C28667:464..69	0.73	g4335763	87	578	4.0e-52	(AC006284) unknown protein [Arabidopsis thaliana]
156620	ATU018560	ATL8C32359:2128..1	gap2	ATCEA4S81	91	ATL8C32359:2128..97	0.65	g4567296	87	2096	3.2e-195	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thalia

												na]
156621	ATU018561	ATL8C35331:1..4914	gap2	ATCEA4S28594	91	ATL8C35331:376..4465	0.45	g4406778	87	1091	1.4e-115	(AC006532) putative brassinosteroid insensitive protein [Arabidopsis thaliana]
156622	ATU018562	ATL8C7122:49..1081	gap2	ATCEA4S34563	91			g135915	87	470	3.7e-43	PATHOGENESIS-RELATED PROTEIN 5 PRECURSOR (PR-5) [Arabidopsis thaliana]
156623	ATU018563	ATL8C21910:1685..1	gap2	ATCEA4C116193_1	91	ATL8C21910:1679..13	0.85	g3193302	85	1035	2.4e-99	(AF069298) contains similarity to a protein kinase domain (Pfam: pkinase.hmm, score:

												166.20) and to legume lectin s beta domain (Pfam: lectin _legB. hmm, score: 139.32) [Arabi dopsis thalia na]
156624	ATU018 564	ATL8C4 161:14 5..539	gap2	ATCEA4 C34006 _1	91			g33416 87	85	110	2.3e- 05	(AC003 672) putati ve ras protei n [Arabi dopsis thalia na]
156625	ATU018 565	ATL8C3 281:26 68..11 31	gap2	ATCEA4 C11835 7_1, ATCEA4 C9632_ 1	91, 89	ATL8C3 281:25 33..11 31	0.82	g48465 6	84	1118	5.7e- 111	monode hydroa scorba te reduct ase (NADH) (EC 1.6.5. 4) - cucumb er [Cucum is sativu s]
156626	ATU018	ATL8C1	gap2	ATCEA4	91	ATL8C1	0.52	g47739	84	618	3.1e-	(AF147

	566	3972:1..1795		S13901		3972:867..1795		15			34	259) No definition line found [Arabidopsis thaliana]
156627	ATU018567	ATL8C45288:842..2820	gap2	ATCEA4S81	91			g4567296	82	1909	4.8e-182	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
156628	ATU018568	ATL8C40772:1..829	gap2	ATCEA4S36353	91	ATL8C40772:411..808	0.81	g3941436	81	1166	2.6e-100	(AF062872) putative transcription factor [Arabidopsis thaliana]
156629	ATU018569	ATL8C16363:1845..496	gap2	ATCEA4C30529_1	91	ATL8C16363:1834..496	0.81	g4467122	81	169	7.9e-17	(AL035538) putative protein [Arabidopsis thalia

												na]
156630	ATU018570	ATL8C10213:1446..507	gap2	ATCEA4C335_1	91	ATL8C10213:1296..507	0.65	g3080388	81	1333		(AL022603) myb-related protein [Arabidopsis thaliana]
156631	ATU018571	ATL8C48677:40..2491	gap2	ATCEA4S11474	91	ATL8C48677:192..1769	0.72	g2443879	80	1816	4.1e-197	(AC002294) similar to jasmonate induced protein gp|Y11483|1883006 [Arabidopsis thaliana]
156632	ATU018572	ATL8C34664:1..1657	gap2	ATCEA4S9735	91	ATL8C34664:307..1657	0.64	g4539470	80	1492	1.0e-86	(AL049500) hypothetical protein [Arabidopsis thaliana]
156633	ATU018573	ATL8C27288:870..1	gap2	ATCEA4C119385_1	91			g1524370	80	158		(X92491) TOM20 [Solanum tubero

												sum]
156634	ATU018574	ATL8C2912:1178..134	gap2	ATCEA4S31017	91	ATL8C2912:1105..134	0.76	g2980770	77	911	3.6e-93	(AL022198) putative protein kinase [Arabidopsis thaliana]
156635	ATU018575	ATL8C33733:417..1	gap2	ATCEA4S35113	91	ATL8C33733:389..93	0.59	g3928091	77	307	4.0e-16	(AC005770) unknown protein [Arabidopsis thaliana]
156636	ATU018576	ATL8C42059:1762..832	gap2	ATCEA4C82284_1, ATCEA4C19233_1	91, 82	ATL8C42059:1734..1104	0.98	g4006899	76	491	5.2e-57	(Z9970 8) putative protein [Arabidopsis thaliana]
156637	ATU018577	ATL8C16797:151..2254	gap2	ATCEA4C403_1	91	ATL8C16797:151..2118	0.84	g4699945	75	1506	4.0e-130	(AC007166) hypothetical protein [Arabidopsis thaliana]
156638	ATU018578	ATL8C44430:4	gap2	ATCEA4C44332	91, 82	ATL8C44430:6	0.54	g2244851	75	682	1.1e-68	(Z9733 7)

		37..2355		_1, ATCEA4C67015_1		32..1796						amine oxidase [Arabidopsis thaliana]
156639	ATU018579	ATL8C46783:1204..1	gap2	ATCEA4C20620_1	91	ATL8C46783:1119..380	0.85	g3850582	74	472	1.2e-44	(AC005278) F15K9.14 [Arabidopsis thaliana]
156640	ATU018580	ATL8C17684:1..2408	gap2	ATCEA4C6943_1, ATCEA4S6285	91, 84	ATL8C17684:70..2408	0.63	g4927190	74	1433	7.8e-148	(AF133659) ATP-binding cassette 7 iron transporter [Homo sapiens]
156641	ATU018581	ATL8C45446:4290..1	gap2	ATCEA4S126	91			g3377816, g4388825, g4417306	74, 73, 45	651, 1515, 207	1.9e-72, 8.0e-137, 5.7e-18	(AF076275) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801)

												[Arabidopsis thaliana]; (AC006528) putative pol polyprotein with reverse transcriptase domain (Pfam: PF00078) [Arabidopsis thaliana]; (AC006446) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
156642	ATU018582	ATL8C13128:2393..4530	gap2	ATCEA4S1181, ATCEA4S29920	91, 86	ATL8C13128:2409..4530	0.98	g399213	73	1934	3.1e-235	ATP-DEPENDENT CLP PROTEASE ATP-

												BINDING SUBUNIT CLPA HOMOLOG CD4B PRECURSOR [Lycopersicon esculentum]
156643	ATU018583	ATL8C44891:1117..115	gap2	ATCEA4C22181_1	91	ATL8C44891:1059..115	0.97	g4503607	73	248	2.1e-21	electron transfer flavoprotein, alpha polypeptide [Homo sapiens]
156644	ATU018584	ATL8C21939:1607..4575	gap2	ATCEA4S12925, ATCEA4S13054, ATCEA4S15577	91, 90, 86	ATL8C21939:1607..3180	0.73	g4544433	73	66	0.82	(AC006955) hypothetical protein [Arabidopsis thaliana]
156645	ATU018585	ATL8C16204:1..507	gap2	ATCEA4C152004_1	91			g2497753	73	221	3.0e-18	NONSPECIFIC LIPID-TRANSFER PROTEIN 3 PRECURSOR

												(LTP 3) [Prunus dulcis]
156646	ATU018586	ATL8C9523:1698..564	gap2	ATCEA4C121383_1, ATCEA4C121391_1	91, 90			g4185129	72	814	2.1e-56	(AC005724) unknown protein [Arabidopsis thaliana]
156647	ATU018587	ATL8C17471:353..1339	gap2	ATCEA4C140833_1	91	ATL8C17471:353..1034	0.74	g2864610	71	172	1.4e-08	(AL021811) putative protein [Arabidopsis thaliana]
156648	ATU018588	ATL8C9827:2743..1617	gap2	ATCEA4S21397, ATCEA4C1044_7	91, 91	ATL8C9827:2743..1788	0.59	g1389699	71	1129	6.1e-113	(U38845) nitrilase 1 [Arabidopsis thaliana]
156649	ATU018589	ATL8C1561:3091..2206	gap2	ATCEA4S32564	91			g2245026	71	496	2.5e-44	(Z97341) hypothetical protein [Arabidopsis thaliana]

156650	ATU018590	ATL8C37727:1..933	gap2	ATCEA4C119539_1	91			g2462754	71	826	1.8e-76	(AC002292) Unknown protein [Arabidopsis thaliana]
156651	ATU018591	ATL8C19554:584..964	gap2	ATCEA4C37987_1	91			g4490331	71	151	4.2e-08	(AL035656) hypothetical protein [Arabidopsis thaliana]
156652	ATU018592	ATL8C44996:4922..1	gap2	ATCEA4S178, ATCEA4S253	91, 83	ATL8C44996:4826..2013	0.51	g4926820, g3513745	70, 47	214, 2433	3.2e-16, 1.5e-217	(AC004135) T17H7.5 [Arabidopsis thaliana]; (AF080118) contains similarity to reverse trancriptase (Pfam: rvt.hmm, score: 42.57) [Arabi

												dopsis thaliana]
156653	ATU018593	ATL8C2339:1..1858	gap2	ATCEA4S11124	91			g4678344	70	949	6.3e-98	(AL049659) putative protein [Arabidopsis thaliana]
156654	ATU018594	ATL8C17558:1427..434	gap2	ATCEA4C119373_1	91	ATL8C17558:1265..434	0.98	g1173624	69	839	1.1e-86	(U34744) cytochrome P-450 [Phalaenopsis sp. 'hybrid SM9108']
156655	ATU018595	ATL8C48137:3028..1	gap2	ATCEA4S27393	91	ATL8C48137:3028..166	0.71	g3377830	69	1486	4.9e-83	(AF075598) contains similarity to Aplysia californica intermediate filament protein A (GB:X60297) [Arabi

												dopsis thaliana]
156656	ATU018596	ATL8C32355:1..3820	gap2	ATCEA4S33488	91	ATL8C32355:49..3820	0.98	g2961373	68	5064	0.0	(AL022141) putative disease resistance protein [Arabidopsis thaliana]
156657	ATU018597	ATL8C31430:2176..9981	gap2	ATCEA4S126, ATCEA4S11628	91, 83	ATL8C31430:2176..2604, ATL8C31430:2917..4922	0.97, 0.44	g4263654, g3377816, g4646224	68, 50, 34	179, 766, 391	5.9e-34, 2.4e-79, 4.0e-24	(AC006136) putative reverse transcriptase [Arabidopsis thaliana]; (AF076275) contains similarity to Arabidopsis thaliana retrotransposon Athila

												(GB:X81801) [Arabidopsis thaliana]; (AC007295) hypothetical protein [Arabidopsis thaliana]
156658	ATU018598	ATL8C33769:2855..540	gap2	ATCEA4S33543, ATCEA4C119978_1	91, 90	ATL8C33769:2432..683	0.85	g1871526	68	626	2.3e-69	(X81997) leucine-rich-repeat protein [Helianthus annuus]
156659	ATU018599	ATL8C47505:4151..1	gap2	ATCEA4C149158_1	91	ATL8C47505:3925..3	0.78	g4850296	68	1764	5.4e-191	(AL049876) RPP1-WsA-like disease resistance protein [Arabidopsis thaliana]
156660	ATU018600	ATL8C18193:1	gap2	ATCEA4S31431	91, 82	ATL8C18193:1	0.46	g930001	68	1135	2.9e-101	(X13434)

		130..183		, ATCEA4S36010		023..450						nitrate reductase NR1 (393 AA) [Arabidopsis thaliana]
156661	ATU018601	ATL8C36977:1377..1919	gap2	ATCEA4S31730, ATCEA4C42762_1	91, 88			g4204289	68	311	6.0e-14	(AC003027) lcl|prt_seq No definition line found [Arabidopsis thaliana]
156662	ATU018602	ATL8C48512:1202..1	gap2	ATCEA4S1872	91	ATL8C48512:1139..36	0.88	g3776573	67	734	4.7e-73	(AC005388) Similar to nodulins and lipase homolog F14J9.5 [Arabidopsis thaliana]
156663	ATU018603	ATL8C47520:1302..413	gap2	ATCEA4S35082	91			g4262182	67	431	3.7e-45	(AC005508) 44123 [Arabidopsis thalia

												na]
156664	ATU018604	ATL8C23328:3601..7	gap2	ATCEA4S5027	91	ATL8C23328:3564..7	0.94	g4115363	66	1935	5.1e-181	(AC005957) putative disease resistance protein [Arabidopsis thaliana]
156665	ATU018605	ATL8C6420:606..1451	gap2	ATCEA4S15016, ATCEA4C7853_1	91, 90	ATL8C6420:636..1440	0.74	g1419758	66	632	9.4e-61	(X98795) geranylgeranyl pyrophosphate synthase [Sinapis alba]
156666	ATU018606	ATL8C7759:1..986	gap2	ATCEA4C18009_1	91	ATL8C7759:86..977	0.73	g3757520	66	1354	1.4e-128	(AC005167) unknown protein [Arabidopsis thaliana]
156667	ATU018607	ATL8C5788:1..503	gap2	ATCEA4S31229	91	ATL8C5788:99..214	0.70	g4662630	66	303		(AC007267) putative ADP-ribosylation

												factor 1 [Arabidopsis thaliana]
156668	ATU018608	ATL8C50241:1..4986	gap2	ATCEA4C13789_1	91	ATL8C50241:119..4959	0.69	g9847566, g4914414	66, 33	302, 411	6.0e-14, 4.1e-17	(Z54153) chilling-inducible protein [Oryza sativa]; (AL050352) Ca2+-transporting ATPase-like protein [Arabidopsis thaliana]
156669	ATU018609	ATL8C10869:3359..1	gap2	ATCEA4S32844	91	ATL8C10869:3122..1462	0.75	g2244765	65	1429	3.8e-123	(Z97335) hypothetical protein [Arabidopsis thaliana]
156670	ATU018610	ATL8C30499:1..1278	gap2	ATCEA4S34266, ATCEA4S31256	91, 85	ATL8C30499:123..1233	0.63	g4100060	65	2057	1.5e-204	(U93161) receptor lectin

												kinase 3 [Arabidopsis thaliana]
156671	ATU018611	ATL8C18141:889..16	gap2	ATCEA4S11030, ATCEA4S24097	91, 84	ATL8C18141:617..16	0.63	g4056425	65	330	5.4e-36	(AC005322) ESTs gb|H36249, gb|AA59732 and gb|AA651219 come from this gene. [Arabidopsis thaliana]
156672	ATU018612	ATL8C8695:3275..914	gap2	ATCEA4S4850	91	ATL8C8695:3057..914	0.62	g4204280	65	330	5.4e-38	(AC004146) Hypothetical protein [Arabidopsis thaliana]
156673	ATU018613	ATL8C13987:356..1	gap2	ATCEA4C129652_1	91			g4337175	65	233	2.6e-19	(AC006416) ESTs gb|T20589, gb|T04648, gb|AA597906, gb|T04111,

												gb|R84180, gb|R65428, gb|T44439, gb|T76570, gb|R90004, gb|T45020, gb|T42457, gb|T20921, gb|AA042762 and gb|AA720210 come from this gene. [Arabidopsis thaliana]
156674	ATU018614	ATL8C34291:1991..205	gap2	ATCEA4C93363_1, ATCEA4S35689	91, 84			g4512711	65	1893	2.3e-151	(AC006569) unknown protein [Arabidopsis thaliana]
156675	ATU018615	ATL8C21082:702..1	gap2	ATCEA4C125652_1	91			g4512715	65	545	5.5e-47	(AC006569) unknown protein

												[Arabidopsis thaliana]
156676	ATU018616	ATL8C11406:1..1700	gap2	ATCEA4C34073_1	91	ATL8C11406:83..1622	0.96	g4539006	64	863	1.0e-78	(AL049481) putative protein [Arabidopsis thaliana]
156677	ATU018617	ATL8C36378:1168..1	gap2	ATCEA4C466_1	91	ATL8C36378:439..95	0.73	g3182922	64	278	3.9e-31	ADP-RIBOSYLATION FACTOR 1 [Brassica rapa]
156678	ATU018618	ATL8C45650:1..2281	gap2	ATCEA4S13727	91	ATL8C45650:60..1699	0.69	g3046696	63	1033	1.8e-71	(AL022224) CTP synthase like protein [Arabidopsis thaliana]
156679	ATU018619	ATL8C31435:1..1102	gap2	ATCEA4S35729	91	ATL8C31435:281..1016	0.65	g3193296	63	1106	9.7e-119	(AF069298) similar to pectinesterase [Arabidopsis thaliana]

156680	ATU018620	ATL8C15913:5211..4363	gap2	ATCEA4S27967	91	ATL8C15913:5110..4492	0.58	g4056488	63	698	9.2e-09	(AC005896) unknown protein [Arabidopsis thaliana]
156681	ATU018621	ATL8C46245:1180..1	gap2	ATCEA4C17176_1	91	ATL8C46245:1101..18	0.47	g4544450, g4512663	63, 58	489, 441	7.5e-40, 2.3e-36	(AC006592) hypothetical protein [Arabidopsis thaliana]; (AC006931) hypothetical protein [Arabidopsis thaliana]
156682	ATU018622	ATL8C2525:1866..593	gap2	ATCEA4C39825_1, ATCEA4S2285, ATCEA4S7903	91, 89, 85	ATL8C2525:1380..593	0.47	g3258637	63	951	6.1e-87	(AF041050) 4-coumarate:CoA ligase [Populus tremuloides]
156683	ATU018623	ATL8C40210:1475..3097	gap2	ATCEA4S1006	91	ATL8C40210:1744..3069	0.90	g4263063	62	1549	4.4e-142	(AC005142) hypothetical

												protein [Arabidopsis thaliana]
156684	ATU018624	ATL8C27334:702..1	gap2	ATCEA4C570_1	91			g1076283	62	653		adenylylsulfate kinase (EC 2.7.1.25) precursor - Arabidopsis thaliana [Arabidopsis thaliana]
156685	ATU018625	ATL8C45526:1..1265	gap2	ATCEA4S32318	91	ATL8C45526:476..1218	0.63	g2352492	60	753	3.1e-76	(AF005047) transport inhibitor response 1 [Arabidopsis thaliana]
156686	ATU018626	ATL8C3305:2371..3516	gap2	ATCEA4S178, ATCEA4S253	91, 87			g4733987	60	88	1.2e-05	(AC007209) hypothetical protein [Arabidopsis thaliana]

156687	ATU018627	ATL8C5372:1..722	gap2	ATCEA4S32915	91			g4538978	60	339	1.2e-31	(AL049487) hypothetical protein [Arabidopsis thaliana]
156688	ATU018628	ATL8C31013:569..1576	gap2	ATCEA4S32211, ATCEA4S24422, ATCEA4S24384, ATCEA4S24385	91, 90, 89, 86	ATL8C31013:569..1302	0.93	g2979542	59	729	1.2e-77	(AC003680) putative Ser/Thr kinase [Arabidopsis thaliana]
156689	ATU018629	ATL8C5576:1230..1	gap2	ATCEA4S19255	91	ATL8C5576:1164..43	0.89	g2795807	59	1287	2.1e-135	(AC003674) hypothetical protein [Arabidopsis thaliana]
156690	ATU018630	ATL8C12988:3086..1	gap2	ATCEA4S31148, ATCEA4C6400_1	91, 84	ATL8C12988:707..13, ATL8C12988:2872..2265	0.58, 0.80	g2245036, g2245110	59, 38	1574, 324	1.1e-137, 7.5e-05	(Z97342) triacylglycerol lipase homolog [Arabidopsis thaliana]; (Z97343)

												hypothetical protein [Arabidopsis thaliana]
156691	ATU018631	ATL8C46195:1..1728	gap2	ATCEA4S32200, ATCEA4S32201	91, 88			g4151070	58	169	3.3e-08	(Y12927) glutamate dehydrogenase (NADP+) [Plasmodium falciparum]
156692	ATU018632	ATL8C15339:2170..1357	gap2	ATCEA4S6664	91			g2505874	58	390	2.6e-43	(Y12776) putative kinase [Arabidopsis thaliana]
156693	ATU018633	ATL8C1165:1360..1	gap2	ATCEA4S386, ATCEA4C27148_1	91, 82	ATL8C1165:1360..85	0.99	g4006865	57	1410	2.1e-133	(Z99707) putative protein [Arabidopsis thaliana]
156694	ATU018634	ATL8C33784:627..3295	gap2	ATCEA4S1186, ATCEA4S13393	91, 88	ATL8C33784:627..2949	0.68	g3152560	57	1552	3.4e-126	(AC002986) Strong similarity

												to ser/thr protein kinases, especially gb|X97980 from solanum bertha ultii, gb|X90990 from solanum tuberosum and gb|D10909 from A. thaliana. [Arabidopsis thaliana]
156695	ATU018635	ATL8C41711:131..770	gap2	ATCEA4S7	91	ATL8C41711:131..770	0.54	g4886286	57	293	3.5e-17	(AL050300) putative protein [Arabidopsis thaliana]
156696	ATU018	ATL8C1	gap2	ATCEA4	91	ATL8C1	0.47	g48369	57	896	2.4e-	(AC006

	636	8078:634..1328		S4403		8078:650..1319		28			71	085) Similar to protein kinases [Arabidopsis thaliana]
156697	ATU018637	ATL8C14129:884..1	gap2	ATCEA4C123280_1	91			g4263779	57	501	8.8e-39	(AC006068) hypothetical protein [Arabidopsis thaliana]
156698	ATU018638	ATL8C37818:2089..401	gap2	ATCEA4S35792	91			g4559350, g3935149	57, 38	184, 588	4.7e-16, 7.3e-62	(AC006585) hypothetical protein [Arabidopsis thaliana]; (AC005106) T25N20.13 [Arabidopsis thaliana]
156699	ATU018639	ATL8C27337:1..1280	gap2	ATCEA4S1829	91	ATL8C27337:779..1081	0.81	g4734010	56	332		(AC007178) hypothetical protein

												[Arabidopsis thaliana]
156700	ATU018640	ATL8C10203:811..1097	gap2	ATCEA4S1023	91	ATL8C10203:811..969	0.77	g3892706	56	277		(AL033545) hypothetical protein [Arabidopsis thaliana]
156701	ATU018641	ATL8C9534:483..2089	gap2	ATCEA4S2332	91	ATL8C9534:489..1965	0.99	g4586254	55	2273	8.2e-130	(AL049640) auxilin-like protein [Arabidopsis thaliana]
156702	ATU018642	ATL8C17451:1037..1	gap2	ATCEA4S17442	91	ATL8C17451:1037..114	0.98	g4835757	55	857	7.6e-92	(AC007202) EST gb|AA404917 comes from this gene. [Arabidopsis thaliana]
156703	ATU018643	ATL8C50134:230..1113	gap2	ATCEA4C120224_1	91	ATL8C50134:321..842	0.93	g4455299	55	223	3.6e-30	(AL035528) putative protein [Arabidopsis

												thaliana]
156704	ATU018644	ATL8C42111:2153..1	gap2	ATCEA4S4944	91	ATL8C42111:2153..154	0.99	g1173121	54	371	1.3e-33	ATP-DEPENDENT RNA HELICASE ROK1 [Saccharomyces cerevisiae]
156705	ATU018645	ATL8C36642:4824..2916	gap2	ATCEA4C117311_1	91	ATL8C36642:4824..3335	0.82	g2055386	54	66	0.0050	(U73681) AlkB [Caulobacter crescentus]
156706	ATU018646	ATL8C34933:1432..1	gap2	ATCEA4C53025_1	91	ATL8C34933:1345..368	0.76	g4006867	54	1719	2.2e-160	(Z99707) putative protein [Arabidopsis thaliana]
156707	ATU018647	ATL8C42920:1011..2997	gap2	ATCEA4C4940_3, ATCEA4C4940_1	91, 84	ATL8C42920:1011..2568	0.71	g4835756	54	628	5.3e-28	(AC007202) Is a member of the PF|00044 glyceraldehyde 3-phosphate dehydrogenas

												e family. ESTs gb|T43985, gb|N38667, gb|N65037, gb|AA713069 and gb|AI099548 come from this gene. [Arabidopsis thaliana]
156708	ATU018648	ATL8C8367:1..1740	gap2	ATCEA4S6361	91	ATL8C8367:55..1740	0.64	g4454016	54	359	3.1e-31	(AL035396) UMP/CMP kinase like protein [Arabidopsis thaliana]
156709	ATU018649	ATL8C27223:905..1	gap2	ATCEA4S11762	91	ATL8C27223:806..57	0.75	g3659524	53	698	1.4e-72	(AF086715) putative histone deacetylase [Drosophila

												melanogaster]
156710	ATU018650	ATL8C12898:1..992	gap2	ATCEA4S34040	91	ATL8C12898:52..572	0.60	g3413704	53	698	2.4e-67	(AC004747) hypothetical protein [Arabidopsis thaliana]
156711	ATU018651	ATL8C49800:2354..252	gap2	ATCEA4S10773	91	ATL8C49800:1846..252	0.48	g4678941	53	2727	4.4e-262	(AL049711) gamma response I protein [Arabidopsis thaliana]
156712	ATU018652	ATL8C430:2137..1119	gap2	ATCEA4C19013_1, ATCEA4C121173_1	91, 89	ATL8C430:1347..1119	0.46	g4895237	53	861	1.3e-62	(AC007659) putative phosphatidate cytidyltransferase [Arabidopsis thaliana]
156713	ATU018653	ATL8C14381:712..1	gap2	ATCEA4S32742, ATCEA4S14610	91, 87	ATL8C14381:632..52	0.93	g2702263	52	510	2.9e-38	(AC003033) mitochondrial F1-ATPase

												, gamma subunit [Arabidopsis thaliana]
156714	ATU018654	ATL8S7135:733..1	gap2	ATCEA4C23941_1	91	ATL8S7135:458..188	0.90	g2129758	52	294	3.5e-32	ubiquitin conjugating enzyme E2 protein - Arabidopsis thaliana [Arabidopsis thaliana]
156715	ATU018655	ATL8C35796:1..4001	gap2	ATCEA4C1808_1, ATCEA4C1808_2, ATCEA4S35579, ATCEA4S20410	91, 90, 90, 83	ATL8C35796:752..3828	0.88	g3415115	51	1939	1.5e-182	(AF081202) villin 2 [Arabidopsis thaliana]
156716	ATU018656	ATL8C19841:1..905	gap2	ATCEA4C39719_1	91	ATL8C19841:150..858	0.87	g2244954	51	673	3.7e-68	(Z97340) strong similarity to ATsEH (EC 3.3.2.3) -

												Arabidopsis thaliana [Arabidopsis thaliana]
156717	ATU018657	ATL8C8674:2399..1	gap2	ATCEA4S33489, ATCEA4S9138, ATCEA4C7906_1	91, 89, 89	ATL8C8674:2399..800	0.82	g3461821	51	815	1.6e-79	(AC004138) putative nucleoside triphosphatase [Arabidopsis thaliana]
156718	ATU018658	ATL8C20017:456..657	gap2	ATCEA4C25540_1	91			g4926829	51	263		(AC004135) T17H7.14 [Arabidopsis thaliana]
156719	ATU018659	ATL8C2535:1769..2295	gap2	ATCEA4C2279_1, ATCEA4S4883	91, 88			g511599	51	699	1.3e-25	(L34685) cell wall protein [Arabidopsis thaliana]
156720	ATU018660	ATL8C3363:1..1432	gap2	ATCEA4S23647, ATCEA4S18580	91, 87	ATL8C3363:33..1178	0.90	g4558462	50	997	6.5e-58	(AF079404) cell cycle switch protei

												n [Medicago sativa subsp. X varia]
156721	ATU018661	ATL8C26178:1520..1	gap2	ATCEA4C51532_1, ATCEA4C117831_1, ATCEA4S7405, ATCEA4S32974	91, 91, 90, 86	ATL8C26178:1500..249	0.77	g4309698	50	1214	6.0e-83	(AC006266) putative glucosyltransferase [Arabidopsis thaliana]
156722	ATU018662	ATL8C13095:1..959	gap2	ATCEA4S19905	91	ATL8C13095:62..534	0.59	g729998	50	110	3.0e-09	MRNA CAPPING ENZYME (MRNA GUANYLYLTRANSFERASE) (GTP--RNA GUANYLYLTRANSFERASE) [Schizosaccharomyces pombe]
156723	ATU018663	ATL8C32453:1041..79	gap2	ATCEA4C93475_1	91	ATL8C32453:890..457	0.61	g4826976	49	141	1.0e-06	prenyl protein protease RCE1

												[Homo sapiens]
156724	ATU018664	ATL8C10752:1753..542	gap2	ATCEA4S33702	91			g3242708	49	1102	1.5e-115	(AC003040) putative serine/threonine protein kinase [Arabidopsis thaliana]
156725	ATU018665	ATL8C1231:4986..1	gap2	ATCEA4S7	91			g4006833	49	3148	0.0	(AC005970) putative reverse transcriptase [Arabidopsis thaliana]
156726	ATU018666	ATL8C15688:578..1	gap2	ATCEA4C4802_1, ATCEA4S14346	91, 82	ATL8C15688:235..158	0.75	g3687237	48	930	2.1e-77	(AC005169) putative Cys3His zinc-finger protein [Arabidopsis thaliana]
156727	ATU018	ATL8C1	gap2	ATCEA4	91	ATL8C1	0.74	g42062	48	217	1.4e-	(AF071

	667	6910:692..1008		S12675		6910:892..768		08			10	527) hypothetical protein [Arabidopsis thaliana]
156728	ATU018668	ATL8C20990:1..694	gap2	ATCEA4S5657	91	ATL8C20990:373..164	0.57	g4510346	48	535	8.8e-54	(AC006921) hypothetical protein [Arabidopsis thaliana]
156729	ATU018669	ATL8C32383:1..937	gap2	ATCEA4S33075	91			g4539005	48	241	1.1e-23	(AL049481) putative oxidoreductase [Arabidopsis thaliana]
156730	ATU018670	ATL8S9021:385..76	gap2	ATCEA4C5187_1	91			g3451072	48	280	3.4e-30	(AL031326) putative protein [Arabidopsis thaliana]
156731	ATU018671	ATL8C35816:1..1293	gap2	ATCEA4C107495_1	91	ATL8C35816:44..989	0.96	g3805765	47	404	2.9e-43	(AC005693) putative protei

												n kinase [Arabidopsis thaliana]
156732	ATU018672	ATL8C3272:818..2865	gap2	ATCEA4S321	91	ATL8C3272:818..2480	0.61	g4432802	47	1645	5.2e-141	(AC006437) putative pol polyprotein, 5' partial [Arabidopsis thaliana]
156733	ATU018673	ATL8C10349:5682..1632	gap2	ATCEA4S13901	91	ATL8C10349:5588..2731	0.43	g4581181	47	2707		(AC006220) unknown protein [Arabidopsis thaliana]
156734	ATU018674	ATL8C19908:1045..385	gap2	ATCEA4C23_1, ATCEA4C23_2	91, 88			g1136793	47	254	1.5e-09	(X91486) PMSR protein [Brassica napus]
156735	ATU018675	ATL8C34976:1164..1	gap2	ATCEA4C122109_1	91	ATL8C34976:1066..268	0.95	g4868375	46	333	3.3e-21	(AF139807) nod factor binding lectin -

												nucleotide phosphohydrolase [Dolichos biflorus]
156736	ATU018676	ATL8C12855:1158..1	gap2	ATCEA4C77044_1, ATCEA4S30139	91, 90	ATL8C12855:894..1555	0.77	g4510402	46	899	3.9e-51	(AC006587) putative AP2 domain [Arabidopsis thaliana]
156737	ATU018677	ATL8C47719:1..1085	gap2	ATCEA4S5515, ATCEA4C21353_1, ATCEA4S17650	91, 90, 82	ATL8C47719:41..897	0.93	g4874264	45	600	2.3e-44	(AC007354) Similar to gb|U54559 eIF3-p40 subunit from Homo sapiens and is a member of the PF|01398 Mov34 family. ESTs gb|N96623 and gb|N07519

												come from this gene. [Arabidopsis thaliana]
156738	ATU018678	ATL8C38598:1..1290	gap2	ATCEA4C101465_1	91	ATL8C38598:213..1184	0.77	g4512348	45	376	1.5e-31	(AB011836) similar to B.subtilis yerM gene(84%-identity) [Bacillus halodurans]
156739	ATU018679	ATL8C36656:299..3156	gap2	ATCEA4C34604_1, ATCEA4S9729, ATCEA4S9692	91, 91, 86			g4678308	45	521	7.2e-53	(AL049655) putative protein [Arabidopsis thaliana]
156740	ATU018680	ATL8C35640:5567..7797	gap2	ATCEA4C42612_1	91	ATL8C35640:5567..7776	0.84	g4678347	44	140	1.5e-11	(AL049659) putative protein [Arabidopsis thaliana]
156741	ATU018681	ATL8C45217:1	gap2	ATCEA4S31116	91, 82	ATL8C45217:9	0.82	g4538935	44	206	3.0e-16	(AL049483)

		90..1240		, ATCEA4 S27724		56..1060						putative protein [Arabidopsis thaliana]
156742	ATU018682	ATL8C32981:3..1851	gap2	ATCEA4 C984_1	91	ATL8C32981:3..1724	0.72	g4138855	44	477	2.4e-18	(AF098072) IMMUTANS [Arabidopsis thaliana]
156743	ATU018683	ATL8C26145:1..844	gap2	ATCEA4 S81	91	ATL8C26145:52..829	0.68	g4567296	44	1023	2.2e-103	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
156744	ATU018684	ATL8S20207:431..1	gap2	ATCEA4 S30404	91			g4580515	44	595	1.1e-55	(AF036301) scarecrow-like 3 [Arabidopsis thaliana]
156745	ATU018685	ATL8C5847:1..1671	gap2	ATCEA4 C25457_1	91	ATL8C5847:404..1671	0.88	g2191166	43	852		(AF007270) A_IG002P16.15 gene produc

												t [Arabidopsis thaliana]
156746	ATU018686	ATL8C46004:21..608	gap2	ATCEA4C64192_1	91			g3980383	43	84	1.8e-08	(AC004561) unknown protein [Arabidopsis thaliana]
156747	ATU018687	ATL8C3085:2494..4109	gap2	ATCEA4S35958	91			g548586	43	188	2.1e-15	PATHOGENESIS-RELATED LEAF PROTEIN 4 PRECURSOR (P4) [Lycopersicon esculentum]
156748	ATU018688	ATL8S1082:583..1	gap2	ATCEA4C56655_1, ATCEA4C8118_1	91, 89			g3004560	43	295	8.1e-30	(AC003673) putative ATP binding protein [Arabidopsis thaliana]
156749	ATU018689	ATL8C946:2175..397	gap2	ATCEA4S3937	91			g4773910	43	317	3.8e-30	(AF147259) No

		5										definition line found [Arabidopsis thaliana]
156750	ATU018690	ATL8C27279:10940..8865	gap2	ATCEA4S32523, ATCEA4S5447	91, 84			g3341693	43	174		(AC003672) unknown protein [Arabidopsis thaliana]
156751	ATU018691	ATL8C33117:1147..352	gap2	ATCEA4C17623_2, ATCEA4C33044_3, ATCEA4C17623_1	91, 89, 88	ATL8C33117:1063..985	0.92	g1872521	42	201	1.6e-15	(U87833) zinc-finger protein Lsd1 [Arabidopsis thaliana]
156752	ATU018692	ATL8C26637:1..768	gap2	ATCEA4C69875_1	91	ATL8C26637:30..363	0.92	g1370194	42	230	2.3e-20	(Z73946) RAB8C [Lotus japonicus]
156753	ATU018693	ATL8S14843:387..1	gap2	ATCEA4C4309_2	91	ATL8S14843:67..174	0.59	g2062421	42	301	2.4e-29	(U82123) expansin [Lycopersicon esculentum]
156754	ATU018	ATL8C1	gap2	ATCEA4	91	ATL8C1	0.51	g25586	42	1664	9.8e-	(AC002

	694	5737:1113..3		S24788		5737:753..291		55			172	354) No definition line found [Arabidopsis thaliana]
156755	ATU018695	ATL8C19328:834..1650	gap2	ATCEA4C764_1, ATCEA4C764_2, ATCEA4S13512	91, 85, 83	ATL8C19328:1187..1609	0.87	g2499606	41	722	2.4e-62	MITOGEN-ACTIVATED PROTEIN KINASE HOMOLOG 2 (MAP KINASE 2) (ATMPK2) [Arabidopsis thaliana]
156756	ATU018696	ATL8C7908:952..1	gap2	ATCEA4C10201_1	91	ATL8C7908:952..157	0.62	g3128186	41	522	1.5e-47	(AC004521) hypothetical protein [Arabidopsis thaliana]
156757	ATU018697	ATL8C30309:486..984	gap2	ATCEA4S9533	91	ATL8C30309:486..680	0.60	g2088654	41	467	2.6e-39	(AF002109) 60S acidic ribosomal protei

												n P0 isolog [Arabidopsis thaliana]
156758	ATU018698	ATL8C36726:1..1313	gap2	ATCEA4C22814_1	91	ATL8C36726:731..1214	0.53	g3522931	41	900	2.1e-87	(AC002535) putative Na+/Ca2+ exchanger [Arabidopsis thalia. na]
156759	ATU018699	ATL8C17229:125..1092	gap2	ATCEA4C6278_1	91	ATL8C17229:713..1072	0.50	g2245060	41	432	3.0e-42	(Z97342) allergen homolog [Arabidopsis thaliana]
156760	ATU018700	ATL8C4452:630..1	gap2	ATCEA4S32145	91			g4586057	41	206	9.7e-07	(AC007020) hypothetical protein [Arabidopsis thaliana]
156761	ATU018701	ATL8C15932:605..1	gap2	ATCEA4C36866_1	91			g4006897	41	893	1.2e-80	(Z99708) globulin-like protein

												[Arabidopsis thaliana]
156762	ATU018702	ATL8C12170:1..1027	gap2	ATCEA4C27632_1, ATCEA4S13631, ATCEA4C118314_1	91, 89, 84	ATL8C12170:64..832	0.90	g2262165	40	556	1.8e-45	(AC002329) predicted protein of unknown function [Arabidopsis thaliana]
156763	ATU018703	ATL8C32854:961..1	gap2	ATCEA4S7340	91	ATL8C32854:961..123	0.74	g3914467	40	460	2.4e-25	26S PROTEASOME REGULATORY SUBUNIT S3 (NUCLEAR ANTIGEN 21D7) [Nicotiana tabacum]
156764	ATU018704	ATL8C46219:1123..72	gap2	ATCEA4C6805_1	91	ATL8C46219:1123..79	0.73	g3075398	40	335	1.9e-26	(AC004484) unknown protein [Arabidopsis thaliana]
156765	ATU018	ATL8C2	gap2	ATCEA4	91	ATL8C2	0.93	g36680	39	175	6.2e-	(AC004

	705	2447:773..1		C6312_1		2447:762..80		86			14	667) unknown protein [Arabidopsis thaliana]
156766	ATU018706	ATL8C8781:1172..298	gap2	ATCEA4S22820	91	ATL8C8781:1084..852	0.92	g2289006	39	284	1.5e-27	(AC002335) glutathione perosidase isolog [Arabidopsis thaliana]
156767	ATU018707	ATL8C40191:926..420	gap2	ATCEA4S32804	91			g2344897	39	332	4.8e-20	(AC002388) unknown protein [Arabidopsis thaliana]
156768	ATU018708	ATL8C10252:402..1	gap2	ATCEA4C69165_1	91			g3269299	39	188	5.2e-11	(AL030978) hypothetical protein [Arabidopsis thaliana]
156769	ATU018709	ATL8C41180:739..1	gap2	ATCEA4S36343	91			g2944178	39	470	1.1e-41	(AF007778) trehalose-6-phosph

												ate phosphatase [Arabidopsis thaliana]
156770	ATU018710	ATL8C12017:2598..1	gap2	ATCEA4S32518	91	ATL8C12017:2598..320	0.89	g3850044	38	317	5.8e-08	(AJ006417) beta-tubulin cofactor D [Homo sapiens]
156771	ATU018711	ATL8C34313:1..845	gap2	ATCEA4C10223_1, ATCEA4C7204_1	91, 85	ATL8C34313:61..553	0.72	g3786009	38	606	1.9e-65	(AC005499) unknown protein [Arabidopsis thaliana]
156772	ATU018712	ATL8S16175:637..106	gap2	ATCEA4S1539	91	ATL8S16175:327..284	0.72	g2462757	38	124	0.29	(AC002292) Hypothetical protein [Arabidopsis thaliana]
156773	ATU018713	ATL8C28329:1..637	gap2	ATCEA4C1732_1	91			g3811320	38	500	9.8e-44	(AF062372) ROOT HAIRLESS 1 [Arabidopsis thalia

												na]
156774	ATU018714	ATL8C18230:22..2448	gap2	ATCEA4S3937	91	ATL8C18230:22..1056	0.95	g4773910	37	327	1.3e-31	(AF147259) No definition line found [Arabidopsis thaliana]
156775	ATU018715	ATL8C42036:5..252	gap2	ATCEA4S1449	91	ATL8C42036:39..170	0.90	g3859591	37	196	3.8e-16	(AF104919) No definition line found [Arabidopsis thaliana]
156776	ATU018716	ATL8C38743:386..1432	gap2	ATCEA4C28952_1	91	ATL8C38743:450..1330	0.89	g4587560	37	404	3.0e-40	(AC006577) F15I1.27 [Arabidopsis thaliana]
156777	ATU018717	ATL8C47195:1..999	gap2	ATCEA4S2048, ATCEA4S16641	91, 90	ATL8C47195:488..822	0.84	g2342724	37	340	8.4e-22	(AC002341) unknown protein [Arabidopsis thaliana]
156778	ATU018718	ATL8C17314:1674..5	gap2	ATCEA4S7212	91	ATL8C17314:1241..5	0.82	g3367522	37	381	1.6e-17	(AC004392) EST

		25				25						gb|T04691 comes from this gene. [Arabidopsis thaliana]
156779	ATU018719	ATL8C1190:1999..996	gap2	ATCEA4C26994_2	91			g3355471	37	439	4.1e-49	(AC004218) putative lysophospholipase [Arabidopsis thaliana]
156780	ATU018720	ATL8S29366:310..1	gap2	ATCEA4C30282_1	91			g4582460	37	407	3.0e-37	(AC007071) unknown protein [Arabidopsis thaliana]
156781	ATU018721	ATL8C32217:2301..1	gap2	ATCEA4S11165, ATCEA4S31911, ATCEA4C70596_1, ATCEA4S19097	91, 89, 85, 84	ATL8C32217:1599..66	0.88	g1946355	36	446	1.9e-48	(U93215) maize transposon MuDR mudrA protein isolog [Arabidopsis thaliana]

156782	ATU018722	ATL8C50193:258..2730	gap2	ATCEA4C117013_1	91	ATL8C50193:446..2498	0.83	g2809264	36	260	3.8e-32	(AC002560) F21B7.33 [Arabidopsis thaliana]
156783	ATU018723	ATL8C39663:998..1532	gap2	ATCEA4S11082	91			g3695396	36	718	1.0e-31	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
156784	ATU018724	ATL8C23710:745..2815	gap2	ATCEA4C116748_1, ATCEA4S28970	91, 87	ATL8C23710:745..2790	0.51	g4755192	35	337	4.2e-21	(AC007018) hypothetical protein [Arabidopsis thaliana]
156785	ATU018725	ATL8C21011:1..1362	gap2	ATCEA4C43255_1	91	ATL8C21011:278..1076	0.93	g4587615	34	638	1.2e-47	(AC006951) putative acyl-CoA

												synthetase [Arabidopsis thaliana]
156786	ATU018726	ATL8C27129:2742..1481	gap2	ATCEA4S36241	91	ATL8C27129:2733..1481	0.48	g882341	34	488	3.5e-40	(U24702) LRP1 [Arabidopsis thaliana]
156787	ATU018727	ATL8S14315:492..1	gap2	ATCEA4S35559	91			g3641839	34	389	2.0e-34	(AL023094) isoflavone reductase - like protein [Arabidopsis thaliana]
156788	ATU018728	ATL8C22274:1529..155	gap2	ATCEA4C118123_1	91	ATL8C22274:1467..403	0.89	g3461838	33	1211	2.4e-109	(AC005315) putative receptor protein kinase [Arabidopsis thaliana]
156789	ATU018729	ATL8C35889:1..360	gap2	ATCEA4C125848_1	91	ATL8C35889:55..347	0.84	g4803933	33	381	3.0e-36	(AC006264) putative disease

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												resistance response protein [Arabidopsis thaliana]
156790	ATU018730	ATL8C44120:314..955	gap2	ATCEA4C19734_1	91	ATL8C44120:533..889	0.80	g2244945	33	604	8.3e-40	(Z97339) similar to HYPOTHETICAL MYELOID CELL LINE PROTEIN 6 (FRAGMENT) [Arabidopsis thaliana]
156791	ATU018731	ATL8C2501:1..527	gap2	ATCEA4S27473	91	ATL8C2501:200..378	0.71	g3702326	33	215	1.8e-12	(AC005397) hypothetical protein [Arabidopsis thaliana]
156792	ATU018732	ATL8C28547:306..1000	gap2	ATCEA4S11934	91	ATL8C28547:392..951	0.56	g4417310	33	457	6.1e-29	(AC006446) putative Athila retroelement ORF1

												protein [Arabidopsis thaliana]
156793	ATU018733	ATL8C25702:2432..894	gap2	ATCEA4S34857	91			g4758466	33	181	6.8e-07	N-acetylglucosaminyltransferase component Gpi1 [Homo sapiens]
156794	ATU018734	ATL8C39350:572..1	gap2	ATCEA4S33274	91			g4220480	33	268	3.4e-19	(AC006069) unknown protein [Arabidopsis thaliana]
156795	ATU018735	ATL8S8923:57..495	gap2	ATCEA4C15797_1	91	ATL8S8923:165..252	0.96	g2244806	32	363	7.2e-25	(Z97336) hypothetical protein [Arabidopsis thaliana]
156796	ATU018736	ATL8C40608:784..128	gap2	ATCEA4S33044	91	ATL8C40608:774..246	0.96	g4218114	32	201	9.8e-19	(AL035353) putative protein [Arabi

												dopsis thaliana]
156797	ATU018737	ATL8C6568:1..1155	gap2	ATCEA4S34834, ATCEA4S24998	91, 82	ATL8C6568:155..1121	0.79	g3413714	32	153	9.7e-12	(AC004747) putative myrosinase-binding protein [Arabidopsis thaliana]
156798	ATU018738	ATL8C37904:1..1054	gap2	ATCEA4S3173	91	ATL8C37904:397..923	0.75	g2760086	32	637	8.2e-43	(Y16046) leucine-rich repeat protein [Arabidopsis thaliana]
156799	ATU018739	ATL8C22399:942..451	gap2	ATCEA4C4261_1	91	ATL8C22399:880..683	0.64	g2245060	32	335	1.3e-31	(Z97342) allergen homolog [Arabidopsis thaliana]
156800	ATU018740	ATL8C9839:1454..27	gap2	ATCEA4S33802	91	ATL8C9839:1116..158	0.63	g4262141	32	289	1.0e-25	(AC005275) hypothetical protein [Arabi

												dopsis thaliana]
156801	ATU018741	ATL8C32509:1..974	gap2	ATCEA4C31689_1	91	ATL8C32509:771..540	0.47	g4580461	32	123	2.0e-10	(AC006081) unknown protein [Arabidopsis thaliana]
156802	ATU018742	ATL8S23051:1..557	gap2	ATCEA4C65331_1	91	ATL8S23051:436..261	0.43	g2801442	32	165	6.5e-10	(AF028338) ubiquitin-conjugating enzyme 15 [Arabidopsis thaliana]
156803	ATU018743	ATL8C42516:1..1254	gap2	ATCEA4C122838_2, ATCEA4C122838_1	91, 91	ATL8C42516:375..1101	0.59	g4388834	31	684	6.7e-71	(AC006528) putative disease resistance protein RPP1, 3' partial [Arabidopsis thaliana]
156804	ATU018744	ATL8S8293:20	gap2	ATCEA4C51936	91	ATL8S8293:12	0.59	g4539297	31	267	2.4e-24	(AL049480)

		3..1		_1		7..34						putative pathogenesis-related protein [Arabidopsis thaliana]
156805	ATU018745	ATL8C48503:1618..664	gap2	ATCEA4S3461	91	ATL8C48503:1565..664	0.85	g4455294	30	621	6.4e-55	(AL035528) putative protein [Arabidopsis thaliana]
156806	ATU018746	ATL8C45151:796..1	gap2	ATCEA4S5493	91	ATL8C45151:796..36	0.78	g3914425	30	245	3.0e-17	PROTEASOME EPSILON CHAIN PRECURSOR (MACROPAIN EPSILON CHAIN) (MULTICATALYTIC ENDOPEPTIDASE COMPLEX EPSILON

												CHAIN) []
156807	ATU018747	ATL8C47233:922..1	gap2	ATCEA4S1104	91	ATL8C47233:866..512	0.50	g4678284	30	814	4.6e-85	(AL049660) putative protein [Arabidopsis thaliana]
156808	ATU018748	ATL8C4897:997..472	gap2	ATCEA4S33110	91			g2827704	30	534	1.8e-53	(AL021684) LRR-like protein [Arabidopsis thaliana]
156809	ATU018749	ATL8S13703:203..515	gap2	ATCEA4C20185_1	91	ATL8S13703:209..511	1.00					
156810	ATU018750	ATL8C10411:1..1154	gap2	ATCEA4C2767_1	91	ATL8C10411:35..1154	0.99					
156811	ATU018751	ATL8S6129:254..552	gap2	ATCEA4C12657_1, ATCEA4C12657_2	91, 91	ATL8S6129:267..345	0.99					
156812	ATU018752	ATL8C7288:1100..254	gap2	ATCEA4S5020	91	ATL8C7288:968..254	0.99					
156813	ATU018753	ATL8S20592:451..1	gap2	ATCEA4S911	91	ATL8S20592:451..131	0.99					

156814	ATU018754	ATL8C25039:26..695	gap2	ATCEA4C13941_1, ATCEA4S1411	91, 89	ATL8C25039:324..500	0.99					
156815	ATU018755	ATL8C6540:1201..1	gap2	ATCEA4S31330, ATCEA4S57	91, 86	ATL8C6540:1201..128	0.99					
156816	ATU018756	ATL8C24069:1742..54	gap2	ATCEA4S19322	91	ATL8C24069:1742..54	0.99					
156817	ATU018757	ATL8S23671:1..651	gap2	ATCEA4C17213_1, ATCEA4S4848	91, 84	ATL8S23671:140..207	0.98					
156818	ATU018758	ATL8C16315:623..38	gap2	ATCEA4S23426	91	ATL8C16315:329..38	0.98					
156819	ATU018759	ATL8C23340:248..953	gap2	ATCEA4C24393_1	91	ATL8C23340:302..939	0.98					
156820	ATU018760	ATL8C5975:901..1	gap2	ATCEA4S5100, ATCEA4C46623_1	91, 85	ATL8C5975:875..1	0.98					
156821	ATU018761	ATL8C25886:319..1	gap2	ATCEA4C25852_1	91	ATL8C25886:237..40	0.98					
156822	ATU018762	ATL8S29552:381..36	gap2	ATCEA4S29603	91	ATL8S29552:381..87	0.98					
156823	ATU018763	ATL8C36075:1883..2136	gap2	ATCEA4S35695, ATCEA4S31453	91, 86	ATL8C36075:1883..2132	0.97					
156824	ATU018764	ATL8C2311:13	gap2	ATCEA4S26883	91, 82	ATL8C2311:13	0.97					

		10..641		, ATCEA4S34149		10..641						
156825	ATU018765	ATL8C42866:1832..2792	gap2	ATCEA4S6059	91	ATL8C42866:1842..2792	0.97					
156826	ATU018766	ATL8C32793:653..1	gap2	ATCEA4C7934_1	91	ATL8C32793:653..170	0.96					
156827	ATU018767	ATL8S27865:560..198	gap2	ATCEA4C118058_1	91	ATL8S27865:338..201	0.96					
156828	ATU018768	ATL8C43632:1..459	gap2	ATCEA4C23871_1, ATCEA4C23871_2	91, 89	ATL8C43632:79..438	0.96					
156829	ATU018769	ATL8C42697:1089..463	gap2	ATCEA4S33851, ATCEA4S35876	91, 90	ATL8C42697:1037..602	0.96					
156830	ATU018770	ATL8C43577:8..1391	gap2	ATCEA4S22551, ATCEA4S14669	91, 88	ATL8C43577:8..760	0.96					
156831	ATU018771	ATL8S2680:1..401	gap2	ATCEA4C1961_1	91	ATL8S2680:301..401	0.96					
156832	ATU018772	ATL8C27930:527..1105	gap2	ATCEA4C21033_1	91	ATL8C27930:583..674	0.95					
156833	ATU018773	ATL8C42847:836..459	gap2	ATCEA4C14635_1, ATCEA4S32602,	91, 90, 87	ATL8C42847:811..459	0.95					

				ATCEA4S30853								
156834	ATU018774	ATL8S2 2963:5 06..1	gap2	ATCEA4S34698, ATCEA4C18742_1, ATCEA4C604_1	91, 91, 90	ATL8S2 2963:3 54..23 8	0.95					
156835	ATU018775	ATL8C7 382:96 3..207 9	gap2	ATCEA4S7739	91	ATL8C7 382:96 3..207 9	0.95					
156836	ATU018776	ATL8C6 985:12 77..43 0	gap2	ATCEA4S1078	91	ATL8C6 985:12 77..43 0	0.94					
156837	ATU018777	ATL8C2 8402:4 56..25 1	gap2	ATCEA4S31269	91	ATL8C2 8402:3 84..25 6	0.94					
156838	ATU018778	ATL8C3 4722:6 337..1 20	gap2	ATCEA4S5582	90	ATL8C3 4722:6 337..1 20	0.94	g43226 70	100	140	0.066	(AF094 508) dentin phosph oryn [Homo sapien s]
156839	ATU018779	ATL8C6 581:1. .245	gap2	ATCEA4C3664_1	91	ATL8C6 581:99 ..236	0.94					
156840	ATU018780	ATL8C2 253:11 26..87	gap2	ATCEA4S19347	91	ATL8C2 253:11 26..17 7	0.94					
156841	ATU018781	ATL8C1 820:1. .541	gap2	ATCEA4S11909	91	ATL8C1 820:37 0..541	0.94					
156842	ATU018782	ATL8C2 4169:4 48..80 1	gap2	ATCEA4C27346_1	91	ATL8C2 4169:4 54..75 8	0.94					

156843	ATU0187 83	ATL8S18686:618..59	gap2	ATCEA4S31763, ATCEA4C563_1	91, 91	ATL8S18686:370..254	0.93					
156844	ATU0187 84	ATL8C15315:2592..1885	gap2	ATCEA4S178, ATCEA4S253	91, 86	ATL8C15315:2501..1885	0.93					
156845	ATU0187 85	ATL8C5230:762..31	gap2	ATCEA4C53216_1	91	ATL8C5230:650..83	0.93					
156846	ATU0187 86	ATL8C38684:1026..1	gap2	ATCEA4C48529_1	91	ATL8C38684:1026..9	0.92					
156847	ATU0187 87	ATL8C36267:4..1298	gap2	ATCEA4C11049_1	91	ATL8C36267:4..1298	0.92					
156848	ATU0187 88	ATL8C43621:44..459	gap2	ATCEA4S23022	91	ATL8C43621:237..452	0.92					
156849	ATU0187 89	ATL8C13655:1519..2063	gap2	ATCEA4S3905	91	ATL8C13655:1697..1991	0.92					
156850	ATU0187 90	ATL8C32166:198..757	gap2	ATCEA4C50781_1	91	ATL8C32166:348..594	0.92					
156851	ATU0187 91	ATL8C8278:214..1	gap2	ATCEA4C6687_1	91	ATL8C8278:166..21	0.92					
156852	ATU0187 92	ATL8C45305:96..633	gap2	ATCEA4S8677	91	ATL8C45305:215..633	0.92					
156853	ATU0187 93	ATL8C30725:2656..18	gap2	ATCEA4S713	91	ATL8C30725:2656..512	0.91					
156854	ATU0187 94	ATL8C43988:437..1	gap2	ATCEA4C26559_1	91	ATL8C43988:437..68	0.91					

156855	ATU018795	ATL8C2 408:654..1655	gap2	ATCEA4S34139	91	ATL8C2 408:654..1415	0.91					
156856	ATU018796	ATL8C4 1780:91..947	gap2	ATCEA4S12850	91	ATL8C4 1780:91..947	0.91					
156857	ATU018797	ATL8C3 719:1914..1	gap2	ATCEA4S6793, ATCEA4C34668_1	91, 87	ATL8C3 719:1914..11	0.90					
156858	ATU018798	ATL8C4 4858:1559..862	gap2	ATCEA4C116418_1	91	ATL8C4 4858:1559..1150	0.90					
156859	ATU018799	ATL8C4 0685:5081..504	gap2	ATCEA4S179, ATCEA4S11082, ATCEA4S3937, ATCEA4S12828	90, 87, 86, 84	ATL8C4 0685:2417..643, ATL8C4 0685:3694..2639	0.90, 0.61	g4773919, g4773910	100, 38	2834, 276	1.3e-253, 9.9e-25	(AF147259) No definition line found [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
156860	ATU018800	ATL8C1 1708:908..1	gap2	ATCEA4C57338_1	91	ATL8C1 1708:811..298	0.90					
156861	ATU018801	ATL8C2 3692:1	gap2	ATCEA4C11610	91	ATL8C2 3692:1	0.90					

		732..1859		9_1		734..1842						
156862	ATU018802	ATL8C18853:379..135	gap2	ATCEA4C60048_1	91	ATL8C18853:379..308	0.89					
156863	ATU018803	ATL8C32385:839..2035	gap2	ATCEA4S32966, ATCEA4S35406	90, 89	ATL8C32385:895..1900	0.89	g2832643	100	377	2.5e-35	(AL021710) hypothetical protein [Arabidopsis thaliana]
156864	ATU018804	ATL8C35363:2611..129	gap2	ATCEA4S4770	91	ATL8C35363:2463..129	0.89					
156865	ATU018805	ATL8S18340:453..183	gap2	ATCEA4C62839_1	91	ATL8S18340:406..183	0.89					
156866	ATU018806	ATL8C36567:842..3545	gap2	ATCEA4C102512_1, ATCEA4S25353	91, 87	ATL8C36567:842..3545	0.89					
156867	ATU018807	ATL8C15261:572..81	gap2	ATCEA4S3290	91	ATL8C15261:528..81	0.89					
156868	ATU018808	ATL8C8749:2981..1347	gap2	ATCEA4C119761_1	90	ATL8C8749:2981..1499	0.88	g4038066	100	665	1.6e-36	(AC005897) hypothetical protein [Arabidopsis thaliana]
156869	ATU018809	ATL8C12144:2	gap2	ATCEA4S30100	90	ATL8C12144:2	0.88	g4335753	100	573	1.8e-47	(AC006284)

		435..1356				383..1356						unknown protein [Arabidopsis thaliana]
156870	ATU018810	ATL8S16048:56..485	gap2	ATCEA4S32619, ATCEA4S9152	91, 84	ATL8S16048:97..184	0.88					
156871	ATU018811	ATL8C24677:1813..60	gap2	ATCEA4C47189_1, ATCEA4S2071	91, 88	ATL8C24677:1680..241	0.88					
156872	ATU018812	ATL8C23982:1080..16	gap2	ATCEA4S2083	91	ATL8C23982:1064..16	0.88					
156873	ATU018813	ATL8C39972:1385..174	gap2	ATCEA4C1232_3, ATCEA4S29066	90, 83	ATL8C39972:1331..244	0.88	g4263818	100	888	1.0e-91	(AC006067) unknown protein [Arabidopsis thaliana]
156874	ATU018814	ATL8C43851:1900..2707	gap2	ATCEA4S35673, ATCEA4S7742, ATCEA4S2442, ATCEA4S11780, ATCEA4S10284	91, 90, 86, 83, 83, 82	ATL8C43851:1929..2707	0.87					

				, ATCEA4 S9291								
156875	ATU018 815	ATL8C1 2583:4 4..675	gap2	ATCEA4 C26317 _1, ATCEA4 S9953	91, 90	ATL8C1 2583:2 34..53 0	0.87					
156876	ATU018 816	ATL8C2 8912:7 36..1	gap2	ATCEA4 S35210 , ATCEA4 C61900 _1	91, 89	ATL8C2 8912:5 96..20 0	0.86					
156877	ATU018 817	ATL8C1 8109:1 88..10 89	gap2	ATCEA4 C11980 2_1	91	ATL8C1 8109:1 88..83 2	0.86					
156878	ATU018 818	ATL8C1 3186:1 365..2 91	gap2	ATCEA4 S7090	91	ATL8C1 3186:1 279..2 91	0.86					
156879	ATU018 819	ATL8S1 057:42 0..618	gap2	ATCEA4 C1965_ 1, ATCEA4 C1965_ 2, ATCEA4 S1250	91, 91, 86	ATL8S1 057:48 5..609	0.85					
156880	ATU018 820	ATL8C2 3654:2 66..15 37	gap2	ATCEA4 C10137 8_1	91	ATL8C2 3654:2 66..15 37	0.85					
156881	ATU018 821	ATL8C1 875:10 82..20	gap2	ATCEA4 S33665	91	ATL8C1 875:10 82..20	0.85					
156882	ATU018 822	ATL8C2 8657:9 31..1	gap2	ATCEA4 C16267 _1	91	ATL8C2 8657:9 05..19 7	0.85					
156883	ATU018 823	ATL8C1 4522:3 283..7	gap2	ATCEA4 S29849	90	ATL8C1 4522:3 283..7	0.85	g21911 95	100	1984	1.2e-148	(AF007 271) contai

		274				274						ns similarity to T. cruzi 3' end fragment (PID:g161956) [Arabidopsis thaliana]
156884	ATU018824	ATL8C19298:624..1	gap2	ATCEA4C308261	91	ATL8C19298:624..13	0.85					
156885	ATU018825	ATL8C30116:1124..570	gap2	ATCEA4C121432_1	91	ATL8C30116:1124..681	0.84					
156886	ATU018826	ATL8C17415:1988..1388	gap2	ATCEA4C9600_1	91	ATL8C17415:1936..1388	0.84					
156887	ATU018827	ATL8C24490:243..969	gap2	ATCEA4S26684	91	ATL8C24490:243..544	0.84					
156888	ATU018828	ATL8C40308:1545..52	gap2	ATCEA4S370	90	ATL8C40308:1545..873	0.84	g4417305	100	1443	5.2e-73	(AC006446) hypothetical protein [Arabidopsis thaliana]
156889	ATU018829	ATL8C29149:66..867	gap2	ATCEA4S1503	91	ATL8C29149:184..867	0.84					

156890	ATU018830	ATL8S16948:1..177	gap2	ATCEA4C9519_1	91	ATL8S16948:94..177	0.84					
156891	ATU018831	ATL8C50214:1740..2923	gap2	ATCEA4S3706	90	ATL8C50214:1740..2638	0.83	g482696	100	186	1.3e-13	actin CA15 - sea squirt (Styela clava) (fragments) []
156892	ATU018832	ATL8C8944:1737..271	gap2	ATCEA4S6429	91	ATL8C8944:1734..271	0.83					
156893	ATU018833	ATL8C17185:870..136	gap2	ATCEA4S28469, ATCEA4S30469	91, 88	ATL8C17185:857..136	0.83					
156894	ATU018834	ATL8C29475:740..310	gap2	ATCEA4C5330_1	91	ATL8C29475:671..310	0.82					
156895	ATU018835	ATL8C24827:1..1965	gap2	ATCEA4S34156, ATCEA4S13721	90, 89	ATL8C24827:126..1796	0.82	g2129698	100	1340	3.7e-137	protein kinase ATN1 (EC 2.7.1.-) - Arabidopsis thaliana [Arabidopsis thaliana]
156896	ATU018836	ATL8S24412:1..391	gap2	ATCEA4S782, ATCEA4	91, 84	ATL8S24412:71..217	0.81					

				S14874								
156897	ATU0183837	ATL8C35343:9977..3171	gap2	ATCEA4S33890, ATCEA4S35631, ATCEA4S1216, ATCEA4S13498, ATCEA4S2319	91, 88, 86, 86, 84	ATL8C35343:9977..3171	0.81					
156898	ATU0183838	ATL8C13679:2422..35	gap2	ATCEA4S27308	91	ATL8C13679:2422..35	0.81					
156899	ATU0183839	ATL8C29422:709..1652	gap2	ATCEA4C20212_1, ATCEA4C20212_2	91, 86	ATL8C29422:778..1359	0.81					
156900	ATU0183840	ATL8S30268:1..569	gap2	ATCEA4C23842_1	91	ATL8S30268:61..569	0.81					
156901	ATU0183841	ATL8C46148:1..898	gap2	ATCEA4C18418_1	91	ATL8C46148:59..767	0.80					
156902	ATU0183842	ATL8C8580:1102..73	gap2	ATCEA4C23547_1	91	ATL8C8580:1102..73	0.80					
156903	ATU0183843	ATL8C47447:1908..474	gap2	ATCEA4C70059_1	91	ATL8C47447:1778..474	0.80					
156904	ATU0183844	ATL8C11386:660..3049	gap2	ATCEA4S12491, ATCEA4S10743, ATCEA4	90, 87, 87	ATL8C11386:694..3038	0.79	g4008006	100	2460	1.5e-227	(AF084034) receptor-like protein

				S1863								kinase [Arabidopsis thaliana]
156905	ATU018845	ATL8C23721:1687..2603	gap2	ATCEA4S33562, ATCEA4S28054	91, 87	ATL8C23721:2000..2467	0.79					
156906	ATU018846	ATL8C42700:1432..51	gap2	ATCEA4S31028	91	ATL8C42700:1432..51	0.79					
156907	ATU018847	ATL8S30934:120..496	gap2	ATCEA4C26159_1	91	ATL8S30934:244..496	0.78					
156908	ATU018848	ATL8C13771:2045..483	gap2	ATCEA4C96027_1	91	ATL8C13771:2043..483	0.78					
156909	ATU018849	ATL8C7742:120..3263	gap2	ATCEA4S178, ATCEA4S253	90, 87	ATL8C7742:120..2149	0.78	g3152612	100	2645	1.3e-232	(AC004482) hypothetical protein [Arabidopsis thaliana]
156910	ATU018850	ATL8C42205:198..590	gap2	ATCEA4S12393, ATCEA4S12394	91, 90	ATL8C42205:294..357	0.78					
156911	ATU018851	ATL8S30103:338..119	gap2	ATCEA4S1747	91	ATL8S30103:254..119	0.77					
156912	ATU018852	ATL8S29836:607..24	gap2	ATCEA4S67	91	ATL8S29836:377..24	0.77					

		6				6						
156913	ATU018853	ATL8C42167:599..1086	gap2	ATCEA4C22398_1	91	ATL8C42167:708..878	0.77					
156914	ATU018854	ATL8S643:571..106	gap2	ATCEA4S4259, ATCEA4S32218	91, 90	ATL8S643:458..110	0.77					
156915	ATU018855	ATL8C16886:638..8	gap2	ATCEA4S34869	91	ATL8C16886:638..306	0.77					
156916	ATU018856	ATL8C14520:419..1126	gap2	ATCEA4S178, ATCEA4S253	91, 84	ATL8C14520:510..1126	0.77					
156917	ATU018857	ATL8C3734:89..1445	gap2	ATCEA4S14857	91	ATL8C3734:89..1445	0.76					
156918	ATU018858	ATL8C21321:14..4893	gap2	ATCEA4S34443, ATCEA4S33179	90, 83	ATL8C21321:14..738, ATL8C21321:2850..872	0.76, 0.95	g4263062	100	487	2.9e-46	(AC005142) hypothetical protein [Arabidopsis thaliana]
156919	ATU018859	ATL8C11439:1841..542	gap2	ATCEA4S395	91	ATL8C11439:1780..542	0.76					
156920	ATU018860	ATL8C42664:70..897	gap2	ATCEA4C61_7	91	ATL8C42664:70..897	0.76					
156921	ATU018861	ATL8C49025:20..679	gap2	ATCEA4C150254_1	91	ATL8C49025:20..542	0.76					
156922	ATU018862	ATL8S4586:80..546	gap2	ATCEA4S26028	91	ATL8S4586:80..546	0.76					
156923	ATU018	ATL8C1	gap2	ATCEA4	91	ATL8C1	0.75					

	863	7620:461..1		S26659		7620:461..246						
156924	ATU018864	ATL8C18015:885..1138	gap2	ATCEA4C24002_2	91	ATL8C18015:885..1117	0.75					
156925	ATU018865	ATL8C24118:1304..3000	gap2	ATCEA4C7951_1	91	ATL8C24118:1304..3000	0.75					
156926	ATU018866	ATL8C5842:626..1	gap2	ATCEA4C15436_1	91	ATL8C5842:474..195	0.75					
156927	ATU018867	ATL8C44752:299..574	gap2	ATCEA4C24136_1	91	ATL8C44752:299..568	0.74					
156928	ATU018868	ATL8C19610:1342..1640	gap2	ATCEA4C4985_1	91	ATL8C19610:1364..1600	0.73					
156929	ATU018869	ATL8C31102:629..2580	gap2	ATCEA4S2224	91	ATL8C31102:629..2557	0.73					
156930	ATU018870	ATL8S7380:1..243	gap2	ATCEA4C48936_1	91	ATL8S7380:52..243	0.73					
156931	ATU018871	ATL8C11835:830..1897	gap2	ATCEA4C102900_1	91	ATL8C11835:959..1897	0.73					
156932	ATU018872	ATL8C16284:752..48	gap2	ATCEA4C31231_1	91	ATL8C16284:425..48	0.73					
156933	ATU018873	ATL8C10897:3578..126	gap2	ATCEA4S2732	91	ATL8C10897:3578..126	0.73					
156934	ATU018874	ATL8C30047:1..949	gap2	ATCEA4C1977_1	91	ATL8C30047:69..949	0.72					
156935	ATU018	ATL8C2	gap2	ATCEA4	91	ATL8C2	0.72					

	875	1610:438..537		C19398_1		1610:438..537						
156936	ATU018876	ATL8S24892:299..1	gap2	ATCEA4C29546_1	91	ATL8S24892:144..50	0.72					
156937	ATU018877	ATL8S7085:1..587	gap2	ATCEA4C2666_1, ATCEA4S27844	91, 88	ATL8S7085:46..542	0.72					
156938	ATU018878	ATL8C14147:1..780	gap2	ATCEA4S30925, ATCEA4S33695	91, 89	ATL8C14147:48..780	0.72					
156939	ATU018879	ATL8C14458:10795..10114	gap2	ATCEA4S178, ATCEA4S253	91, 86	ATL8C14458:10704..10114	0.71					
156940	ATU018880	ATL8C5922:205..1097	gap2	ATCEA4C33365_1	91	ATL8C5922:205..1016	0.71					
156941	ATU018881	ATL8S11356:295..1	gap2	ATCEA4C143708_1	91	ATL8S11356:228..162	0.70					
156942	ATU018882	ATL8S16245:318..116	gap2	ATCEA4C32705_1	91	ATL8S16245:288..116	0.70					
156943	ATU018883	ATL8C49822:1605..493	gap2	ATCEA4C155259_1	91	ATL8C49822:1605..493	0.70					
156944	ATU018884	ATL8S13598:704..1	gap2	ATCEA4C7840_1	91	ATL8S13598:540..32	0.70					
156945	ATU018885	ATL8C7254:1..1696	gap2	ATCEA4C13586_1, ATCEA4S7732	91, 84	ATL8C7254:187..1610	0.70					

156946	ATU0188886	ATL8C4921:257..1423	gap2	ATCEA4C85838_1	91	ATL8C4921:257..722	0.70					
156947	ATU0188887	ATL8C39871:169..2198	gap2	ATCEA4S35906, ATCEA4C69464_1, ATCEA4S13051	91, 90, 87	ATL8C39871:169..1723	0.70					
156948	ATU0188888	ATL8C43689:1005..64	gap2	ATCEA4C57008_1	91	ATL8C43689:940..234	0.70					
156949	ATU0188889	ATL8C39413:62..1336	gap2	ATCEA4C98392_1	91	ATL8C39413:62..1336	0.70					
156950	ATU0188890	ATL8C11383:801..108	gap2	ATCEA4C44158_1	91	ATL8C11383:382..108	0.69					
156951	ATU0188891	ATL8C9963:1191..2436	gap2	ATCEA4S3034	91	ATL8C9963:1193..2436	0.69					
156952	ATU0188892	ATL8C30949:489..55	gap2	ATCEA4S3159	91	ATL8C30949:152..55	0.69					
156953	ATU0188893	ATL8S8754:1..332	gap2	ATCEA4S11909	91	ATL8S8754:92..327	0.68					
156954	ATU0188894	ATL8C47514:639..85	gap2	ATCEA4S36153	91	ATL8C47514:573..85	0.68					
156955	ATU0188895	ATL8C43128:445..1	gap2	ATCEA4C779_1	91	ATL8C43128:387..72	0.66					
156956	ATU0188896	ATL8S15742:525..1	gap2	ATCEA4C102432_1, ATCEA4	91, 84, 84	ATL8S15742:419..316	0.66					

				S25309, ATCEA4S9271								
156957	ATU018897	ATL8C42839:1721..841	gap2	ATCEA4S10720	91	ATL8C42839:1721..841	0.66					
156958	ATU018898	ATL8S25734:51..426	gap2	ATCEA4S3991	91	ATL8S25734:68..426	0.66					
156959	ATU018899	ATL8S6673:625..199	gap2	ATCEA4S15419, ATCEA4C33097_1	91, 87	ATL8S6673:576..338	0.66					
156960	ATU018900	ATL8C47878:643..1723	gap2	ATCEA4S31123	91	ATL8C47878:709..1723	0.66					
156961	ATU018901	ATL8S29524:446..29	gap2	ATCEA4C25762_1	91	ATL8S29524:421..244	0.65					
156962	ATU018902	ATL8C18200:463..718	gap2	ATCEA4C70196_1	91	ATL8C18200:486..687	0.65					
156963	ATU018903	ATL8S24066:1..301	gap2	ATCEA4S4227, ATCEA4S12969	91, 84	ATL8S24066:25..147	0.65					
156964	ATU018904	ATL8C13347:1..627	gap2	ATCEA4C22697_1, ATCEA4S9801, ATCEA4S9769	91, 85, 82	ATL8C13347:48..399	0.65					
156965	ATU018905	ATL8C35470:1..816	gap2	ATCEA4S2150	91	ATL8C35470:104..816	0.65					

156966	ATU018906	ATL8C18057:69..1076	gap2	ATCEA4C4184_1, ATCEA4S33938	90, 83	ATL8C18057:308..778	0.65	g4105697	100	1224	3.7e-123	(AF049870) thaumatin-like protein [Arabidopsis thaliana]
156967	ATU018907	ATL8S3560:1..366	gap2	ATCEA4C17690_1	91	ATL8S3560:58..263	0.64					
156968	ATU018908	ATL8S26825:509..1	gap2	ATCEA4C35088_1	91	ATL8S26825:509..47	0.64					
156969	ATU018909	ATL8C18852:218..1	gap2	ATCEA4C32634_1	91	ATL8C18852:218..22	0.63					
156970	ATU018910	ATL8C42522:1593..1129	gap2	ATCEA4S12925	91	ATL8C42522:1544..1454	0.63					
156971	ATU018911	ATL8C13906:3450..2588	gap2	ATCEA4S178, ATCEA4S253	91, 89	ATL8C13906:3359..2588	0.63					
156972	ATU018912	ATL8C29437:552..1	gap2	ATCEA4C11314_1	91	ATL8C29437:80..7	0.62					
156973	ATU018913	ATL8S28105:1..384	gap2	ATCEA4C23636_1	91	ATL8S28105:47..199	0.62					
156974	ATU018914	ATL8C4617:330..1	gap2	ATCEA4C7287_2	91	ATL8C4617:246..125	0.62					
156975	ATU018915	ATL8S14200:643..287	gap2	ATCEA4C24134_1, ATCEA4S2627	91, 83	ATL8S14200:637..515	0.62					
156976	ATU018916	ATL8C1173:15	gap2	ATCEA4C5161	91	ATL8C1173:15	0.61					

		82..1		1		82..220						
156977	ATU018917	ATL8C34144:859..1250	gap2	ATCEA4C38907_1	91	ATL8C34144:859..1139	0.61					
156978	ATU018918	ATL8C10402:59..1204	gap2	ATCEA4S29614, ATCEA4S35402	91, 90	ATL8C10402:59..1094	0.60					
156979	ATU018919	ATL8C26172:40..736	gap2	ATCEA4C118750_1	91	ATL8C26172:40..635	0.60					
156980	ATU018920	ATL8C9674:168..1410	gap2	ATCEA4C23726_1	91	ATL8C9674:168..1410	0.59					
156981	ATU018921	ATL8C940:286..998	gap2	ATCEA4C91731_1	91	ATL8C940:286..998	0.59					
156982	ATU018922	ATL8C47924:2323..392	gap2	ATCEA4S31979	91	ATL8C47924:2323..466	0.59					
156983	ATU018923	ATL8C18036:624..1	gap2	ATCEA4S15285	91	ATL8C18036:624..294	0.59					
156984	ATU018924	ATL8C14497:2309..8969	gap2	ATCEA4S27399, ATCEA4S344, ATCEA4S253, ATCEA4S178	90, 88, 84, 82	ATL8C14497:5017..8969	0.59	g4263541, g4378066, g4836930	100, 71, 71	798, 1894, 3947	2.5e-83, 1.0e-192, 0.0	(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AF098

												806) polyprotein [Sorghum bicolor]; (AC006085) Hypothetical protein [Arabidopsis thaliana]
156985	ATU018925	ATL8C582:1415..5964	gap2	ATCEA4S179, ATCEA4S3937, ATCEA4S11082	90, 89, 88	ATL8C582:1415..3949, ATL8C582:4176..4875	0.59, 0.66	g4773919	100	2627	8.1e-214	(AF147259) No definition line found [Arabidopsis thaliana]
156986	ATU018926	ATL8C39892:15877..5926	gap2	ATCEA4S321, ATCEA4S12828	90, 90	ATL8C39892:15877..5926	0.59	g4586066	100	3230	0.0	(AC006194) putative pol polyprotein, 3' partial [Arabidopsis thaliana]
156987	ATU018927	ATL8C9278:6881..1	gap2	ATCEA4S178, ATCEA4S253	90, 88	ATL8C9278:4574..854	0.59	g4038066, g4585937	100, 48	533, 698		(AC005897) hypothetical

												protein [Arabidopsis thaliana]; (AC007211) putative replication protein A1 [Arabidopsis thaliana]
156988	ATU018928	ATL8C45466:18..853	gap2	ATCEA4S9997	91	ATL8C45466:18..853	0.59					
156989	ATU018929	ATL8C27732:2274..852	gap2	ATCEA4S28633, ATCEA4C52792_2, ATCEA4S570	91, 88, 88	ATL8C27732:2119..1105	0.58					
156990	ATU018930	ATL8C12640:1..479	gap2	ATCEA4S4156	91	ATL8C12640:112..479	0.58					
156991	ATU018931	ATL8C22885:470..220	gap2	ATCEA4C9575_1	91	ATL8C22885:450..220	0.58					
156992	ATU018932	ATL8C45573:323..993	gap2	ATCEA4S29707	91	ATL8C45573:323..993	0.58					
156993	ATU018933	ATL8C1931:857..232	gap2	ATCEA4C22353_1	91	ATL8C1931:857..470	0.58					

156994	ATU018934	ATL8C134:7233..265	gap2	ATCEA4C124090_1	90	ATL8C134:7197..392	0.58	g4567296, g4558684, g4567295	100, 99, 74	2373, 487, 1703		(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AC006586) hypothetical protein [Arabidopsis thaliana]; (AC006918) putative pol polyprotein [Arabidopsis thaliana]
156995	ATU018935	ATL8C22339:484..2780	gap2	ATCEA4C34705_1, ATCEA4C98368_1, ATCEA4S12615, ATCEA4S17217	91, 91, 89, 87	ATL8C22339:484..2084, ATL8C22339:2449..2342	0.57, 0.93					

156996	ATU018936	ATL8C23735:141..2758	gap2	ATCEA4S5711	90	ATL8C23735:1046..2051	0.56	g3236255	100	673	4.6e-73	(AC004684) hypothetical protein [Arabidopsis thaliana]
156997	ATU018937	ATL8C9611:321..1340	gap2	ATCEA4S68	91	ATL8C9611:361..1340	0.56					
156998	ATU018938	ATL8C7831:320..1235	gap2	ATCEA4C14106_1	91	ATL8C7831:404..1190	0.56					
156999	ATU018939	ATL8C21256:968..156	gap2	ATCEA4S34481	91	ATL8C21256:762..156	0.55					
157000	ATU018940	ATL8C25537:734..212	gap2	ATCEA4S35256	91	ATL8C25537:407..212	0.55					
157001	ATU018941	ATL8C26258:214..592	gap2	ATCEA4S31756	91	ATL8C26258:379..576	0.55					
157002	ATU018942	ATL8C31704:404..554	gap2	ATCEA4C26784_1	91	ATL8C31704:405..485	0.55					
157003	ATU018943	ATL8C12427:109..427	gap2	ATCEA4C17050_1	91	ATL8C12427:109..316	0.55					
157004	ATU018944	ATL8C7883:253..1477	gap2	ATCEA4S33443	91	ATL8C7883:1477..253	0.55					
157005	ATU018945	ATL8C49455:1	gap2	ATCEA4C44633	91	ATL8C49455:1	0.54					

		92..825		_1		92..825						
157006	ATU018946	ATL8C29903:465..53	gap2	ATCEA4S2917	91	ATL8C29903:465..53	0.54					
157007	ATU018947	ATL8C12008:1704..1	gap2	ATCEA4S12652	91	ATL8C12008:1704..1	0.54					
157008	ATU018948	ATL8C44103:725..134	gap2	ATCEA4S32738	91	ATL8C44103:643..134	0.53					
157009	ATU018949	ATL8C1281:63..1009	gap2	ATCEA4C205_3	91	ATL8C1281:63..1009	0.53					
157010	ATU018950	ATL8C1051:108..1680	gap2	ATCEA4S3569	90	ATL8C1051:108..1680	0.53	g4455297	100	752	1.8e-80	(AL035528) hypothetical protein [Arabidopsis thaliana]
157011	ATU018951	ATL8C5971:897..14	gap2	ATCEA4S7825	91	ATL8C5971:676..14	0.52					
157012	ATU018952	ATL8C21237:132..529	gap2	ATCEA4S3931	91	ATL8C21237:324..482	0.52					
157013	ATU018953	ATL8C4023:101..3854	gap2	ATCEA4S344, ATCEA4S178, ATCEA4S253	91, 90, 82	ATL8C4023:167..3854	0.52					
157014	ATU018954	ATL8C10019:128..1254	gap2	ATCEA4S32958	91	ATL8C10019:128..1254	0.51					
157015	ATU018955	ATL8S20945:3	gap2	ATCEA4C1915	91	ATL8S20945:3	0.51					

		82..490		1		84..475						
157016	ATU018956	ATL8S11060:440..1	gap2	ATCEA4S14109	91	ATL8S11060:402..32	0.50					
157017	ATU018957	ATL8C36617:199..1169	gap2	ATCEA4S33101	91	ATL8C36617:199..1169	0.49					
157018	ATU018958	ATL8S24660:421..270	gap2	ATCEA4S2918	91	ATL8S24660:419..270	0.47					
157019	ATU018959	ATL8S13046:334..1	gap2	ATCEA4C274261	91	ATL8S13046:334..9	0.47					
157020	ATU018960	ATL8C49312:929..1875	gap2	ATCEA4S32355	91	ATL8C49312:1875..929	0.46					
157021	ATU018961	ATL8C35180:350..1435	gap2	ATCEA4S471	91	ATL8C35180:513..1435	0.46					
157022	ATU018962	ATL8C6965:536..1030	gap2	ATCEA4S13791,ATCEA4C111581	91, 87	ATL8C6965:981..729	0.46					
157023	ATU018963	ATL8C12534:2958..2704	gap2	ATCEA4S10336	91	ATL8C12534:2845..2704	0.46					
157024	ATU018964	ATL8C3540:85..2198	gap2	ATCEA4C2858_1,ATCEA4S9662	91, 89	ATL8C3540:85..2198	0.45					
157025	ATU018965	ATL8C35428:671..1051	gap2	ATCEA4S32652	91	ATL8C35428:744..1051	0.45					
157026	ATU018	ATL8S1	gap2	ATCEA4	91	ATL8S1	0.44					

	966	9262:7 3..521		S27036		9262:7 3..299						
157027	ATU018 967	ATL8S2 9488:4 73..24 5	gap2	ATCEA4 S35021	91	ATL8S2 9488:4 73..24 5	0.44					
157028	ATU018 968	ATL8C4 2096:1 ..619	gap2	ATCEA4 C8817_ 1	91	ATL8C4 2096:5 56..35	0.44					
157029	ATU018 969	ATL8C1 8446:7 69..64 1	gap2	ATCEA4 C20473 _1	91	ATL8C1 8446:7 01..64 1	0.43					
157030	ATU018 970	ATL8S1 109:39 9..9	gap2	ATCEA4 S27399	91	ATL8S1 109:39 9..72	0.43					
157031	ATU018 971	ATL8C4 6147:5 53..28	gap2	ATCEA4 S8093	91	ATL8C4 6147:5 53..28	0.43					
157032	ATU018 972	ATL8C3 3707:1 044..1 09	gap2	ATCEA4 C29441 _1, ATCEA4 S16490	91, 83	ATL8C3 3707:1 033..1 09	0.42					
157033	ATU018 973	ATL8C3 5268:5 ..734	gap2	ATCEA4 C11796 _1	91	ATL8C3 5268:2 88..73 4	0.42					
157034	ATU018 974	ATL8C3 5538:1 ..1086	gap2	ATCEA4 S10335	91	ATL8C3 5538:1 22..10 86	0.42					
157035	ATU018 975	ATL8C1 672:13 76..14 450	gap2	ATCEA4 S13901	91	ATL8C1 672:13 76..14 450	0.41					
157036	ATU018 976	ATL8C3 3856:7 48..99 0	gap2	ATCEA4 C11723 5_1	91							
157037	ATU018 977	ATL8C2 7205:4 85..10 3	gap2	ATCEA4 S32789	91							

157038	ATU018978	ATL8C10795:17..372	gap2	ATCEA4S178	91							
157039	ATU018979	ATL8C33929:5595..5393	gap2	ATCEA4S4379	91							
157040	ATU018980	ATL8C840:886..1311	gap2	ATCEA4S15640	91							
157041	ATU018981	ATL8C32213:1..112	gap2	ATCEA4S33281	91							
157042	ATU018982	ATL8C47659:1576..1939	gap2	ATCEA4C4905_1	91							
157043	ATU018983	ATL8C8364:101..1	gap2	ATCEA4S33562	91							
157044	ATU018984	ATL8S14129:1..200	gap2	ATCEA4C28099_1	91							
157045	ATU018985	ATL8C24814:1..152	gap2	ATCEA4C45144_1	91							
157046	ATU018986	ATL8C11996:205..581	gap2	ATCEA4C26956_1	91							
157047	ATU018987	ATL8S19333:1..93	gap2	ATCEA4S29075	91							
157048	ATU018988	ATL8S19146:98..381	gap2	ATCEA4C5286_1	91							
157049	ATU018989	ATL8C27418:937..748	gap2	ATCEA4C43295_1	91							
157050	ATU018990	ATL8C49462:1514..1242	gap2	ATCEA4S26020	91							

157051	ATU018991	ATL8C45512:4044..3278	gap2	ATCEA4S29236	91							
157052	ATU018992	ATL8C8128:388..769	gap2	ATCEA4S1196	91							
157053	ATU018993	ATL8C14413:2010..2210	gap2	ATCEA4C37329_1	91							
157054	ATU018994	ATL8C45337:510..883	gap2	ATCEA4S81	91							
157055	ATU018995	ATL8S14149:294..1	gap2	ATCEA4C8866_1, ATCEA4S28960	91, 86							
157056	ATU018996	ATL8C11451:1..196	gap2	ATCEA4C125771_1	91							
157057	ATU018997	ATL8C30614:979..786	gap2	ATCEA4S11958	91							
157058	ATU018998	ATL8C16691:1966..1604	gap2	ATCEA4S34418	91							
157059	ATU018999	ATL8C25197:4321..4464	gap2	ATCEA4C22622_1	91							
157060	ATU019000	ATL8S18021:251..581	gap2	ATCEA4S1870	91							
157061	ATU019001	ATL8C14345:2141..2970	gap2	ATCEA4C13766_1	91							
157062	ATU019	ATL8S1	gap2	ATCEA4	91							

	002	7993:435..528		S11153								
157063	ATU019003	ATL8S17941:122..602	gap2	ATCEA4S34884	91							
157064	ATU019004	ATL8C3432:725..530	gap2	ATCEA4S2190	91							
157065	ATU019005	ATL8C7870:277..645	gap2	ATCEA4S22534	91							
157066	ATU019006	ATL8C40335:583..816	gap2	ATCEA4S34301	91							
157067	ATU019007	ATL8C12011:200..577	gap2	ATCEA4C51220_2	91							
157068	ATU019008	ATL8C4505:808..482	gap2	ATCEA4S13177,ATCEA4S13374,ATCEA4S13253,ATCEA4S13428	91,90,87, 85							
157069	ATU019009	ATL8C7832:329..104	gap2	ATCEA4S32093	91							
157070	ATU019010	ATL8C41359:406..29	gap2	ATCEA4S321	91							
157071	ATU019011	ATL8S9304:1..123	gap2	ATCEA4C38125_1	91							
157072	ATU019012	ATL8C29552:922..60	gap2	ATCEA4S24136	91							

		4										
157073	ATU019013	ATL8C10774:1..437	gap2	ATCEA4C9976_1	91							
157074	ATU019014	ATL8C23666:681..952	gap2	ATCEA4S13965, ATCEA4S25863	91, 89							
157075	ATU019015	ATL8S11395:92..1	gap2	ATCEA4S26633, ATCEA4C33023_1	91, 86							
157076	ATU019016	ATL8C28902:414..1	gap2	ATCEA4C9148_1	91							
157077	ATU019017	ATL8C30368:197..440	gap2	ATCEA4S32110	91							
157078	ATU019018	ATL8C1449:1594..1662	gap2	ATCEA4C23104_1	91							
157079	ATU019019	ATL8C32799:1141..1205	gap2	ATCEA4C45968_1	91							
157080	ATU019020	ATL8C2894:1388..1273	gap2	ATCEA4S13100	91							
157081	ATU019021	ATL8C351:693..253	gap2	ATCEA4S25098	91							
157082	ATU019022	ATL8C5636:216..1	gap2	ATCEA4S32767	91							
157083	ATU019023	ATL8C7564:600..410	gap2	ATCEA4S7947	91							
157084	ATU019	ATL8C7	gap2	ATCEA4	91							

	024	550:1282..1030		S11221								
157085	ATU019025	ATL8C44789:186..1	gap2	ATCEA4S93	91							
157086	ATU019026	ATL8C43009:426..88	gap2	ATCEA4C2790_1	91							
157087	ATU019027	ATL8C14203:534..1	gap2	ATCEA4C125488_1	91							
157088	ATU019028	ATL8C25339:1..161	gap2	ATCEA4S35100	91							
157089	ATU019029	ATL8S16863:80..1	gap2	ATCEA4S35993	91							
157090	ATU019030	ATL8C44743:127..496	gap2	ATCEA4S12331	91							
157091	ATU019031	ATL8C44723:1155..782	gap2	ATCEA4C116300_1	91							
157092	ATU019032	ATL8C21927:998..1077	gap2	ATCEA4S14360, ATCEA4C313441	91, 85							
157093	ATU019033	ATL8C44573:362..1027	gap2	ATCEA4S28626	91							
157094	ATU019034	ATL8C37529:55..429	gap2	ATCEA4C450441	91							
157095	ATU019035	ATL8C20002:977..499	gap2	ATCEA4S34430	91							
157096	ATU019	ATL8C1	gap2	ATCEA4	91							

	036	2663:816..424		S11794								
157097	ATU019037	ATL8C44760:413..1	gap2	ATCEA4C5416_2, ATCEA4C5416_1, ATCEA4S12681	91, 90, 82							
157098	ATU019038	ATL8C5630:257..1	gap2	ATCEA4S30364	91							
157099	ATU019039	ATL8C34913:3832..3982	gap2	ATCEA4S29574, ATCEA4S30830	91, 83							
157100	ATU019040	ATL8S31006:138..226	gap2	ATCEA4C1874_1	91							
157101	ATU019041	ATL8C13538:3386..3031	gap2	ATCEA4S178	91							
157102	ATU019042	ATL8C49714:1..152	gap2	ATCEA4C42561_1	91							
157103	ATU019043	ATL8C42424:2211..1825	gap2	ATCEA4C42561_1	91							
157104	ATU019044	ATL8S16373:1..182	gap2	ATCEA4C116639_1	91							
157105	ATU019045	ATL8C10875:1906..1548	gap2	ATCEA4S16770, ATCEA4S33738, ATCEA4	91, 86, 85							

				S29739								
157106	ATU019046	ATL8C44237:469..564	gap2	ATCEA4S12644	91							
157107	ATU019047	ATL8C19143:1455..1560	gap2	ATCEA4S16091	91							
157108	ATU019048	ATL8C44112:1..292	gap2	ATCEA4S12718	91							
157109	ATU019049	ATL8C34490:1385..1697	gap2	ATCEA4S13901	91							
157110	ATU019050	ATL8C21738:437..658	gap2	ATCEA4S2, ATCEA4C2173_1	91, 82							
157111	ATU019051	ATL8C21718:1394..858	gap2	ATCEA4S15138	91							
157112	ATU019052	ATL8C34208:4324..3772	gap2	ATCEA4S5825	91							
157113	ATU019053	ATL8C19914:148..367	gap2	ATCEA4C19675_1	91							
157114	ATU019054	ATL8C5283:732..1385	gap2	ATCEA4C158087_1	91							
157115	ATU019055	ATL8C7133:454..767	gap2	ATCEA4S3379	91							
157116	ATU019056	ATL8C37497:446..940	gap2	ATCEA4C23056_1	91							

157117	ATU019057	ATL8C3390:3180..3482	gap2	ATCEA4C553_1	91							
157118	ATU019058	ATL8C37399:254..529	gap2	ATCEA4C7844_1	91							
157119	ATU019059	ATL8C7390:1..906	gap2	ATCEA4C70196_1, ATCEA4S33547, ATCEA4C23637_1, ATCEA4S13465	91, 90, 89, 83							
157120	ATU019060	ATL8S5899:1..405	gap2	ATCEA4C17467_1	91							
157121	ATU019061	ATL8C10216:1..511	gap2	ATCEA4C435_1, ATCEA4S32587	91, 91							
157122	ATU019062	ATL8C44035:1..184	gap2	ATCEA4S4811	91							
157123	ATU019063	ATL8C49557:760..1566	gap2	ATCEA4S4697	91							
157124	ATU019064	ATL8S15459:1..116	gap2	ATCEA4C36603_1	91							
157125	ATU019065	ATL8C43988:1218..1389	gap2	ATCEA4S13054	91							
157126	ATU019066	ATL8C2702:678..855	gap2	ATCEA4C29268_1	91							

157127	ATU0190067	ATL8C26550:233..114	gap2	ATCEA4S12080	91							
157128	ATU0190068	ATL8C529:635..91	gap2	ATCEA4C122213_1	91							
157129	ATU0190069	ATL8S15312:394..82	gap2	ATCEA4C4334_1	91							
157130	ATU0190070	ATL8C23908:1109..1691	gap2	ATCEA4C13612_1	91							
157131	ATU0190071	ATL8C6188:4700..4981	gap2	ATCEA4S14365	91							
157132	ATU0190072	ATL8C41125:604..480	gap2	ATCEA4S13499	91							
157133	ATU0190073	ATL8C27392:1713..2249	gap2	ATCEA4C32617_1	91							
157134	ATU0190074	ATL8C11853:2031..1676	gap2	ATCEA4C116621_1, ATCEA4S27323	91, 88							
157135	ATU0190075	ATL8C27096:769..890	gap2	ATCEA4C28472_1	91							
157136	ATU0190076	ATL8C27690:622..1	gap2	ATCEA4S35970	91							
157137	ATU0190077	ATL8S14474:1..188	gap2	ATCEA4C692_1	91							
157138	ATU0190078	ATL8S20176:1..56	gap2	ATCEA4C5561_1	91							

157139	ATU019079	ATL8C10716:1..341	gap2	ATCEA4C61045_1, ATCEA4S33025	91, 91							
157140	ATU019080	ATL8C40247:1395..1574	gap2	ATCEA4S12828	91							
157141	ATU019081	ATL8C5076:147..1	gap2	ATCEA4C116621_1, ATCEA4S27323	91, 85							
157142	ATU019082	ATL8C43711:1..216	gap2	ATCEA4C87416_1	91							
157143	ATU019083	ATL8C43538:1565..1423	gap2	ATCEA4C20283_1	91							
157144	ATU019084	ATL8C28242:540..793	gap2	ATCEA4C118423_1	91							
157145	ATU019085	ATL8C38660:39..450	gap2	ATCEA4S34429	91							
157146	ATU019086	ATL8C6908:1284..510	gap2	ATCEA4C100682_1	91							
157147	ATU019087	ATL8C69:106..405	gap2	ATCEA4S26099	91							
157148	ATU019088	ATL8C6892:1032..1495	gap2	ATCEA4C7195_1	91							
157149	ATU019089	ATL8C4107:1824..2200	gap2	ATCEA4S17117, ATCEA4S20900	91, 82							

157150	ATU0190 90	ATL8S15447:444..604	gap2	ATCEA4C32343_1	91							
157151	ATU0190 91	ATL8S22282:1..73	gap2	ATCEA4C36480_1	91							
157152	ATU0190 92	ATL8C5:1628..1985	gap2	ATCEA4S11406	91							
157153	ATU0190 93	ATL8C43512:1..527	gap2	ATCEA4S2037	91							
157154	ATU0190 94	ATL8C27137:622..211	gap2	ATCEA4S3446	91							
157155	ATU0190 95	ATL8C17277:1..138	gap2	ATCEA4C16588_1	91							
157156	ATU0190 96	ATL8C48699:522..227	gap2	ATCEA4C7600_1	91							
157157	ATU0190 97	ATL8C25771:692..200	gap2	ATCEA4C118516_1, ATCEA4C66576_1	91, 86							
157158	ATU0190 98	ATL8C31054:1498..1873	gap2	ATCEA4S11553	91							
157159	ATU0190 99	ATL8C38639:638..324	gap2	ATCEA4C8946_1	91							
157160	ATU0190 100	ATL8C43187:2507..2152	gap2	ATCEA4S178	91							
157161	ATU0190 101	ATL8C4307:54	gap2	ATCEA4C37542	91							

		7..878		_1								
157162	ATU019102	ATL8C32988:496..884	gap2	ATCEA4S4487	91							
157163	ATU019103	ATL8C6547:1779..2003	gap2	ATCEA4S5128	91							
157164	ATU019104	ATL8C19779:1382..881	gap2	ATCEA4S35295	91							
157165	ATU019105	ATL8S23568:142..1	gap2	ATCEA4C64454_1	91							
157166	ATU019106	ATL8C10616:721..651	gap2	ATCEA4C98941_1	91							
157167	ATU019107	ATL8S1394:72..1	gap2	ATCEA4S35993	91							
157168	ATU019108	ATL8S1735:217..499	gap2	ATCEA4C9607_1	91							
157169	ATU019109	ATL8C43049:675..1033	gap2	ATCEA4S20277	91							
157170	ATU019110	ATL8C48755:583..1	gap2	ATCEA4S31429	91							
157171	ATU019111	ATL8C35190:633..413	gap2	ATCEA4S35151	91							
157172	ATU019112	ATL8C48746:830..702	gap2	ATCEA4S16558	91							
157173	ATU019113	ATL8C18169:288..11	gap2	ATCEA4S1125	90			g3183454	100	502	1.1e-40	HYPOTHETICAL 30.7

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157174	ATU019114	ATL8C43038:292..392	gap2	ATCEA4S36016	91							
157175	ATU019115	ATL8C18944:767..597	gap2	ATCEA4S178	91							
157176	ATU019116	ATL8C2684:321..8	gap2	ATCEA4S2207	91							
157177	ATU019117	ATL8C5654:474..721	gap2	ATCEA4S31106	91							
157178	ATU019118	ATL8C29801:808..1039	gap2	ATCEA4S11209	91							
157179	ATU019119	ATL8C43012:621..1164	gap2	ATCEA4S16831	91							
157180	ATU019120	ATL8C3307:1286..1148	gap2	ATCEA4C7657_1	91							
157181	ATU019121	ATL8C19647:1..232	gap2	ATCEA4C2108_2	91							
157182	ATU019122	ATL8C17482:517..46	gap2	ATCEA4S17876	91							

		0										
157183	ATU019123	ATL8C42978:1041..1526	gap2	ATCEA4C98751_1	91							
157184	ATU019124	ATL8C7711:1861..2352	gap2	ATCEA4C116431_1	91							
157185	ATU019125	ATL8C37202:224..1	gap2	ATCEA4S33570, ATCEA4C6459_1	91, 91							
157186	ATU019126	ATL8C48494:1..432	gap2	ATCEA4S23711	91							
157187	ATU019127	ATL8C19769:676..319	gap2	ATCEA4S18746, ATCEA4C898772	91, 89							
157188	ATU019128	ATL8C14032:1..465	gap2	ATCEA4S10884	91							
157189	ATU019129	ATL8C17174:990..857	gap2	ATCEA4C30553_1	91							
157190	ATU019130	ATL8C42604:1..300	gap2	ATCEA4C73558_1	91							
157191	ATU019131	ATL8C15175:790..1103	gap2	ATCEA4S12315	91							
157192	ATU019132	ATL8S15256:130..1	gap2	ATCEA4C6005_1	91							
157193	ATU019133	ATL8S13312:1..80	gap2	ATCEA4S2179	91							

157194	ATU019134	ATL8C50165:5820..6242	gap2	ATCEA4C14793_1	91							
157195	ATU019135	ATL8C31852:772..544	gap2	ATCEA4S27301	91							
157196	ATU019136	ATL8C28411:1..244	gap2	ATCEA4C117042_1	91							
157197	ATU019137	ATL8C3050:1..61	gap2	ATCEA4C61018_1	91							
157198	ATU019138	ATL8C539:829..1269	gap2	ATCEA4C15692_1	91							
157199	ATU019139	ATL8S19820:1..220	gap2	ATCEA4C28427_1, ATCEA4S33195	91, 90							
157200	ATU019140	ATL8C3744:1..231	gap2	ATCEA4S4723	91							
157201	ATU019141	ATL8C42549:158..560	gap2	ATCEA4C79004_1	91							
157202	ATU019142	ATL8C15080:259..34	gap2	ATCEA4S2694	91							
157203	ATU019143	ATL8C40918:520..733	gap2	ATCEA4S27122	91							
157204	ATU019144	ATL8C42617:686..31	gap2	ATCEA4S2877	91							
157205	ATU019145	ATL8C4091:3163..2970	gap2	ATCEA4S30657	91							
157206	ATU019	ATL8C4	gap2	ATCEA4	91							

	146	2564:339..2		S12665								
157207	ATU019147	ATL8S13073:1..275	gap2	ATCEA4C2971_3	91							
157208	ATU019148	ATL8C13145:371..46	gap2	ATCEA4S3570	91							
157209	ATU019149	ATL8C22320:1..712	gap2	ATCEA4C361_1	91							
157210	ATU019150	ATL8C3689:2936..3129	gap2	ATCEA4S3497	91							
157211	ATU019151	ATL8C16088:172..41	gap2	ATCEA4S34689	91							
157212	ATU019152	ATL8C18426:442..704	gap2	ATCEA4S34587	91							
157213	ATU019153	ATL8C9569:166..725	gap2	ATCEA4C127705_1, ATCEA4S11224	91, 89							
157214	ATU019154	ATL8C5607:396..58	gap2	ATCEA4C18908_1	91							
157215	ATU019155	ATL8C33342:1891..1693	gap2	ATCEA4S3345	91							
157216	ATU019156	ATL8C30902:3302..3109	gap2	ATCEA4S26415	91							
157217	ATU019157	ATL8C33638:325..484	gap2	ATCEA4C22631_1	91							
157218	ATU019158	ATL8C35351:1	gap2	ATCEA4S4999	91							

		..210										
157219	ATU019159	ATL8S12596:1..228	gap2	ATCEA4S33259	91							
157220	ATU019160	ATL8C13914:3264..2859	gap2	ATCEA4S12925	91							
157221	ATU019161	ATL8C39364:248..412	gap2	ATCEA4S26760	91							
157222	ATU019162	ATL8C1313:1043..947	gap2	ATCEA4C9924_1	91							
157223	ATU019163	ATL8C42115:778..489	gap2	ATCEA4S11357	91							
157224	ATU019164	ATL8C13910:1..360	gap2	ATCEA4S13054	91							
157225	ATU019165	ATL8C18148:818..1	gap2	ATCEA4C129437_1	90			g3212857	100	154	2.4e-15	(AC004005) hypothetical protein [Arabidopsis thaliana]
157226	ATU019166	ATL8C8333:1052..1198	gap2	ATCEA4C18323_1	91							
157227	ATU019167	ATL8C42043:1695..1552	gap2	ATCEA4S26325	91							
157228	ATU019168	ATL8C14782:1..192	gap2	ATCEA4S344	91							

157229	ATU0191169	ATL8C13593:5294..4932	gap2	ATCEA4S27391	91							
157230	ATU0191170	ATL8C13822:1..300	gap2	ATCEA4C20291_1	91							
157231	ATU0191171	ATL8C38733:426..239	gap2	ATCEA4S2254	91							
157232	ATU0191172	ATL8C29722:1..255	gap2	ATCEA4S30295	91							
157233	ATU0191173	ATL8C5678:1785..1867	gap2	ATCEA4C56208_1	91							
157234	ATU0191174	ATL8C18146:200..138	gap2	ATCEA4S7781	91							
157235	ATU0191175	ATL8S21476:109..1	gap2	ATCEA4C5968_1	91							
157236	ATU0191176	ATL8S12432:199..70	gap2	ATCEA4S2182	91							
157237	ATU0191177	ATL8C31447:732..304	gap2	ATCEA4S11020	91							
157238	ATU0191178	ATL8C11813:1384..1102	gap2	ATCEA4S29885	91							
157239	ATU0191179	ATL8C13455:5167..5515	gap2	ATCEA4S26412	91							
157240	ATU0191180	ATL8C35102:618..920	gap2	ATCEA4C119645_1	91							

157241	ATU019181	ATL8C4177:1..155	gap2	ATCEA4S30511	91							
157242	ATU019182	ATL8C38367:247..563	gap2	ATCEA4S25813	91							
157243	ATU019183	ATL8C24458:851..1764	gap2	ATCEA4S31295	90			g4371291	100	277	3.2e-25	(AC006260) hypothetical protein [Arabidopsis thaliana]
157244	ATU019184	ATL8S12266:1..59	gap2	ATCEA4S29321	91							
157245	ATU019185	ATL8C39731:972..863	gap2	ATCEA4C909_1	91							
157246	ATU019186	ATL8C41700:137..1	gap2	ATCEA4S30609	91							
157247	ATU019187	ATL8C49022:1225..896	gap2	ATCEA4C149785_1, ATCEA4S34360	91, 87							
157248	ATU019188	ATL8C34644:2784..2994	gap2	ATCEA4C64057_1, ATCEA4C64057_2	91, 91							
157249	ATU019189	ATL8C374:2961..2295	gap2	ATCEA4C78660_1	91							
157250	ATU019190	ATL8C31746:3	gap2	ATCEA4C714_1	91							

		19..158										
157251	ATU0191	ATL8C19151:484..607	gap2	ATCEA4C892_1	91							
157252	ATU0192	ATL8C41610:1700..1327	gap2	ATCEA4S11199	91							
157253	ATU0193	ATL8C38601:1..454	gap2	ATCEA4C7433_1	91							
157254	ATU0194	ATL8C49409:1132..303	gap2	ATCEA4C8004_1	91							
157255	ATU0195	ATL8C20862:2001..1799	gap2	ATCEA4S12562	91							
157256	ATU0196	ATL8C4153:618..747	gap2	ATCEA4S6452	91							
157257	ATU0197	ATL8C41521:214..719	gap2	ATCEA4C24678_1	91							
157258	ATU0198	ATL8C1034:4042..3668	gap2	ATCEA4S27192	91							
157259	ATU0199	ATL8C49293:1..262	gap2	ATCEA4C35617_2, ATCEA4C35617_1	91, 87							
157260	ATU0200	ATL8S11557:31..556	gap2	ATCEA4C20753_1	91							
157261	ATU0201	ATL8C41443:164..1	gap2	ATCEA4S30230	91							

157262	ATU019202	ATL8C10613:267..146	gap2	ATCEA4S11821	91							
157263	ATU019203	ATL8C26960:1..121	gap2	ATCEA4C428391	91							
157264	ATU019204	ATL8C41437:222..1082	gap2	ATCEA4S370	91							
157265	ATU019205	ATL8S29561:494..27	gap2	ATCEA4C122067_1, ATCEA4S27207	91, 89							
157266	ATU019206	ATL8C17025:3639..4000	gap2	ATCEA4S11326	91							
157267	ATU019207	ATL8C27596:3254..3485	gap2	ATCEA4S4613	91							
157268	ATU019208	ATL8C28296:91..1	gap2	ATCEA4S422	91							
157269	ATU019209	ATL8C20857:44..467	gap2	ATCEA4S19227	91							
157270	ATU019210	ATL8C40126:548..872	gap2	ATCEA4S27325	91							
157271	ATU019211	ATL8C6157:459..351	gap2	ATCEA4C479701	91							
157272	ATU019212	ATL8C13714:1602..898	gap2	ATCEA4S564	91							
157273	ATU019213	ATL8S15914:376..1	gap2	ATCEA4C676821	91							

157274	ATU019214	ATL8C23604:1..514	gap2	ATCEA4C9188_1	91							
157275	ATU019215	ATL8C21473:1407..1014	gap2	ATCEA4C49248_2, ATCEA4C49248_1	91, 90							
157276	ATU019216	ATL8C32022:2250..2393	gap2	ATCEA4S14781	91							
157277	ATU019217	ATL8C17317:3954..3517	gap2	ATCEA4C103382_3, ATCEA4S26031	91, 82							
157278	ATU019218	ATL8C20812:3591..3874	gap2	ATCEA4C24144_1	91							
157279	ATU019219	ATL8C27370:1967..1659	gap2	ATCEA4S1694	91							
157280	ATU019220	ATL8C27689:1..117	gap2	ATCEA4S23960	91							
157281	ATU019221	ATL8S15609:461..1	gap2	ATCEA4C16274_2, ATCEA4S30205, ATCEA4S14110	91, 90, 88							
157282	ATU019222	ATL8C2382:516..736	gap2	ATCEA4S8406	91							
157283	ATU019223	ATL8C13499:179..320	gap2	ATCEA4S253	91							

157284	ATU019224	ATL8C33182:55..389	gap2	ATCEA4S30232	91							
157285	ATU019225	ATL8C11018:270..908	gap2	ATCEA4C4756_1, ATCEA4S10336	91, 86							
157286	ATU019226	ATL8C34741:248..490	gap2	ATCEA4C144616_1	91							
157287	ATU019227	ATL8C41627:529..78	gap2	ATCEA4C4737_1, ATCEA4S30475	91, 84							
157288	ATU019228	ATL8C25917:362..797	gap2	ATCEA4C34393_1	91							
157289	ATU019229	ATL8C31318:87..468	gap2	ATCEA4S18016	91							
157290	ATU019230	ATL8C16006:842..1278	gap2	ATCEA4C9161_1, ATCEA4C9161_2	91, 89							
157291	ATU019231	ATL8C28489:1..296	gap2	ATCEA4C57113_1	91							
157292	ATU019232	ATL8S10857:345..469	gap2	ATCEA4S8051	91							
157293	ATU019233	ATL8S27227:102..28	gap2	ATCEA4C9089_1, ATCEA4S7745, ATCEA4S16221	91, 90, 88, 87							

				, ATCEA4 S2985								
157294	ATU019 234	ATL8C3 1367:3 59..46 9	gap2	ATCEA4 C520_3 , ATCEA4 S2225, ATCEA4 S34127 , ATCEA4 S16473	91, 91, 88, 86							
157295	ATU019 235	ATL8C3 1348:5 34..44	gap2	ATCEA4 C11960 5_1	91							
157296	ATU019 236	ATL8C4 6591:1 ..209	gap2	ATCEA4 C6316_ 1, ATCEA4 C6316_ 2	91, 90							
157297	ATU019 237	ATL8C5 313:38 35..34 64	gap2	ATCEA4 C12137 1_1	91							
157298	ATU019 238	ATL8C2 0738:3 72..28 1	gap2	ATCEA4 C482_1	91							
157299	ATU019 239	ATL8C1 0064:6 97..19 7	gap2	ATCEA4 C6631_ 1	91							
157300	ATU019 240	ATL8C2 0734:4 60..76 5	gap2	ATCEA4 S34843 , ATCEA4 S15084 , ATCEA4 S11938	91, 88, 83							
157301	ATU019 241	ATL8C3 7307:3	gap2	ATCEA4 C5986_	91							

		61..751		1								
157302	ATU019242	ATL8S17414:76..416	gap2	ATCEA4C9227_1	91							
157303	ATU019243	ATL8C17984:2865..2471	gap2	ATCEA4S3872	91							
157304	ATU019244	ATL8C23637:2401..1346	gap2	ATCEA4S6597	91							
157305	ATU019245	ATL8C31988:273..714	gap2	ATCEA4C74419_1	91							
157306	ATU019246	ATL8C29885:300..29	gap2	ATCEA4S3880	91							
157307	ATU019247	ATL8C16603:283..387	gap2	ATCEA4S29961	91							
157308	ATU019248	ATL8C36807:283..639	gap2	ATCEA4C7235_1	91							
157309	ATU019249	ATL8C15858:4158..3354	gap2	ATCEA4S14600	91							
157310	ATU019250	ATL8C15556:1917..2029	gap2	ATCEA4S26832	91							
157311	ATU019251	ATL8C26888:1241..704	gap2	ATCEA4S14670	91							
157312	ATU019252	ATL8C12210:305..1	gap2	ATCEA4C26931_1	91							
157313	ATU019	ATL8C8	gap2	ATCEA4	91							

	253	792:1793..1419		C17636_1								
157314	ATU019254	ATL8C20658:3379..1968	gap2	ATCEA4C127705_1	91							
157315	ATU019255	ATL8C37838:792..175	gap2	ATCEA4C29086_1	91							
157316	ATU019256	ATL8S24025:1..572	gap2	ATCEA4C134318_1	91							
157317	ATU019257	ATL8C33577:692..1	gap2	ATCEA4C5192_1	91							
157318	ATU019258	ATL8C13563:126..518	gap2	ATCEA4S34626	91							
157319	ATU019259	ATL8C23463:311..200	gap2	ATCEA4S2383	91							
157320	ATU019260	ATL8C36809:1..208	gap2	ATCEA4S15632	91							
157321	ATU019261	ATL8C26041:358..100	gap2	ATCEA4C31505_1	91							
157322	ATU019262	ATL8C29374:394..715	gap2	ATCEA4C10032_1	91							
157323	ATU019263	ATL8C3383:1..759	gap2	ATCEA4S4492, ATCEA4S25892	91, 85							
157324	ATU019264	ATL8C37800:2487..3075	gap2	ATCEA4S20335, ATCEA4	91, 89							

				S11783								
157325	ATU019265	ATL8C34586:4000..3510	gap2	ATCEA4S34967	91							
157326	ATU019266	ATL8S21049:148..1	gap2	ATCEA4C6271_1	91							
157327	ATU019267	ATL8C3681:2442..2839	gap2	ATCEA4S126	91							
157328	ATU019268	ATL8C28847:1649..1236	gap2	ATCEA4C88849_1	91							
157329	ATU019269	ATL8C49832:12..509	gap2	ATCEA4C123195_1	91							
157330	ATU019270	ATL8C2802:1806..1584	gap2	ATCEA4S30378	91							
157331	ATU019271	ATL8C9786:1..273	gap2	ATCEA4S344	91							
157332	ATU019272	ATL8C11885:463..621	gap2	ATCEA4C5374_1	91							
157333	ATU019273	ATL8C1682:481..1	gap2	ATCEA4S34896	91							
157334	ATU019274	ATL8S3533:381..710	gap2	ATCEA4C3198_1	91							
157335	ATU019275	ATL8C9757:2010..2350	gap2	ATCEA4S178	91							
157336	ATU019276	ATL8S553:458..175	gap2	ATCEA4C2742_1	91							
157337	ATU019	ATL8C2	gap2	ATCEA4	91							

	277	4678:6822..6587		S4723								
157338	ATU019278	ATL8C9457:945..627	gap2	ATCEA4C13220_2	91							
157339	ATU019279	ATL8C974:186..629	gap2	ATCEA4C90142_1	91							
157340	ATU019280	ATL8C17363:3580..4075	gap2	ATCEA4C119921_1	91							
157341	ATU019281	ATL8C23050:1..226	gap2	ATCEA4C88043_1	91							
157342	ATU019282	ATL8C37287:1446..1529	gap2	ATCEA4S5228	91							
157343	ATU019283	ATL8C46461:2629..2560	gap2	ATCEA4C7225_1	91							
157344	ATU019284	ATL8C36903:306..803	gap2	ATCEA4C36330_1	91							
157345	ATU019285	ATL8C10010:743..1326	gap2	ATCEA4S34818	91							
157346	ATU019286	ATL8C14313:2538..3316	gap2	ATCEA4C117610_1	90			g3128201	100	984	3.2e-94	(AC004521) unknown protein [Arabidopsis thaliana]
157347	ATU019287	ATL8C26079:1	gap2	ATCEA4S34551	91							

		..262										
157348	ATU0192288	ATL8C32028:1016..798	gap2	ATCEA4C821_2, ATCEA4S22190, ATCEA4S36283	91, 84, 82							
157349	ATU0192289	ATL8C4568:2517..3217	gap2	ATCEA4C20605_1	91							
157350	ATU0192290	ATL8C949:1094..685	gap2	ATCEA4S5817	91							
157351	ATU0192291	ATL8C35107:7823..7468	gap2	ATCEA4S178	91							
157352	ATU0192292	ATL8C22998:898..1241	gap2	ATCEA4S7	91							
157353	ATU0192293	ATL8C31677:297..90	gap2	ATCEA4S34794	91							
157354	ATU0192294	ATL8S20869:162..82	gap2	ATCEA4S29075	91							
157355	ATU0192295	ATL8S20919:1..572	gap2	ATCEA4C10771_1	91							
157356	ATU0192296	ATL8S21118:1..137	gap2	ATCEA4S33555, ATCEA4S32785	91, 85							
157357	ATU0192297	ATL8C24784:2668..2313	gap2	ATCEA4S178	91							
157358	ATU0192298	ATL8C46026:3	gap2	ATCEA4C92394	91							

		80..116		_1								
157359	ATU0191299	ATL8C36719:443..1	gap2	ATCEA4C98149_1	91							
157360	ATU0191300	ATL8C14574:923..1168	gap2	ATCEA4S11955	91							
157361	ATU0191301	ATL8C20556:184..1	gap2	ATCEA4S126	91							
157362	ATU0191302	ATL8C46062:1288..961	gap2	ATCEA4S32397	91							
157363	ATU0191303	ATL8S21889:84..1	gap2	ATCEA4S35993	91							
157364	ATU0191304	ATL8C25288:1171..562	gap2	ATCEA4C79608_1	91							
157365	ATU0191305	ATL8C46065:2541..2090	gap2	ATCEA4S34915	91							
157366	ATU0191306	ATL8C15599:500..829	gap2	ATCEA4S26513	91							
157367	ATU0191307	ATL8C46088:205..1	gap2	ATCEA4S35915	91							
157368	ATU0191308	ATL8C5616:778..222	gap2	ATCEA4S33934, ATCEA4S31677, ATCEA4S35270	91, 90, 87							
157369	ATU0191309	ATL8S12641:2	gap2	ATCEA4C41452	91							

		72..402		_1								
157370	ATU019310	ATL8C4805:3071..1308	gap2	ATCEA4C2298_1, ATCEA4S4828	90, 82			g3831440	100	2053	4.4e-194	(AC005819) putative cytochrome P450 [Arabidopsis thaliana]
157371	ATU019311	ATL8C46241:1196..742	gap2	ATCEA4S26491	91							
157372	ATU019312	ATL8C22632:451..848	gap2	ATCEA4S4218	91							
157373	ATU019313	ATL8C31918:2493..2828	gap2	ATCEA4S6903	91							
157374	ATU019314	ATL8S23808:1..195	gap2	ATCEA4S15774, ATCEA4S15083, ATCEA4S14686, ATCEA4S15160, ATCEA4S22320, ATCEA4S15491, ATCEA4	91, 90, 89, 89, 89, 89, 89, 88, 83							

				S14764, ATCEA4S14698, ATCEA4S15846								
157375	ATU019315	ATL8C16259:2748..2287	gap2	ATCEA4C74478_1	91							
157376	ATU019316	ATL8C15811:443..1016	gap2	ATCEA4S1647	91							
157377	ATU019317	ATL8C12228:1532..1225	gap2	ATCEA4S14648	91							
157378	ATU019318	ATL8S2351:594..415	gap2	ATCEA4S4723	91							
157379	ATU019319	ATL8S23538:212..1	gap2	ATCEA4S29075	91							
157380	ATU019320	ATL8C46488:1..220	gap2	ATCEA4S34384	91							
157381	ATU019321	ATL8C3182:1683..1163	gap2	ATCEA4C10611_1	91							
157382	ATU019322	ATL8S24076:543..339	gap2	ATCEA4C4921_1	91							
157383	ATU019323	ATL8S24079:224..431	gap2	ATCEA4S7408	91							
157384	ATU019324	ATL8S2408:567..174	gap2	ATCEA4S35643	91							
157385	ATU019	ATL8C1	gap2	ATCEA4	91							

	325	3101:1..228		S274								
157386	ATU019326	ATL8C26076:478..919	gap2	ATCEA4S20255, ATCEA4S26236	91, 91							
157387	ATU019327	ATL8C49884:1374..1682	gap2	ATCEA4S13901	91							
157388	ATU019328	ATL8S25290:323..580	gap2	ATCEA4S6185	91							
157389	ATU019329	ATL8S2546:226..120	gap2	ATCEA4S772	91							
157390	ATU019330	ATL8C46633:583..327	gap2	ATCEA4S13695	91							
157391	ATU019331	ATL8C24361:656..109	gap2	ATCEA4C74549_1	91							
157392	ATU019332	ATL8S25823:51..518	gap2	ATCEA4C84130_1	91							
157393	ATU019333	ATL8S26051:72..194	gap2	ATCEA4S26552	91							
157394	ATU019334	ATL8C35699:1072..1290	gap2	ATCEA4S25972	91							
157395	ATU019335	ATL8C22485:324..1	gap2	ATCEA4S30983	91							
157396	ATU019336	ATL8S26368:85..1	gap2	ATCEA4S35993	91							
157397	ATU019337	ATL8C17410:5	gap2	ATCEA4C10581	91							

		95..975		2_1								
157398	ATU019338	ATL8S26894:248..405	gap2	ATCEA4S26848	91							
157399	ATU019339	ATL8C46790:1..610	gap2	ATCEA4S7377	91							
157400	ATU019340	ATL8S27563:711..613	gap2	ATCEA4S23368	91							
157401	ATU019341	ATL8S27634:329..1	gap2	ATCEA4S32356	91							
157402	ATU019342	ATL8C46810:982..695	gap2	ATCEA4S25871	91							
157403	ATU019343	ATL8C46821:543..1365	gap2	ATCEA4C13269_1	91							
157404	ATU019344	ATL8C46856:1628..1288	gap2	ATCEA4S24625	91							
157405	ATU019345	ATL8C34674:2111..1667	gap2	ATCEA4C88983_1	91							
157406	ATU019346	ATL8C3512:337..727	gap2	ATCEA4S12031	91							
157407	ATU019347	ATL8C2493:1..94	gap2	ATCEA4C14600_1	91							
157408	ATU019348	ATL8S28812:1..145	gap2	ATCEA4S36213	91							
157409	ATU019349	ATL8S29119:1..288	gap2	ATCEA4C39089_1	91							

157410	ATU019350	ATL8S29234:1..397	gap2	ATCEA4S30045	91							
157411	ATU019351	ATL8C9100:1..102	gap2	ATCEA4S33179, ATCEA4S27666	91, 91							
157412	ATU019352	ATL8C45846:91..162	gap2	ATCEA4C20109_1	91							
157413	ATU019353	ATL8C10475:1418..1938	gap2	ATCEA4S35183	91							
157414	ATU019354	ATL8S29661:460..571	gap2	ATCEA4S31527	91							
157415	ATU019355	ATL8C46974:536..105	gap2	ATCEA4C1915_1	91							
157416	ATU019356	ATL8C5867:2307..2758	gap2	ATCEA4C33551_1, ATCEA4S16151	91, 82							
157417	ATU019357	ATL8C26567:222..1	gap2	ATCEA4S3894	91							
157418	ATU019358	ATL8C1688:875..1246	gap2	ATCEA4S126	91							
157419	ATU019359	ATL8C8917:873..429	gap2	ATCEA4S35545	91							
157420	ATU019360	ATL8C47236:1103..752	gap2	ATCEA4S35620	91							
157421	ATU019361	ATL8S3216:36	gap2	ATCEA4S34450	91							

		2..491										
157422	ATU019362	ATL8C473:3167..2548	gap2	ATCEA4C29093_1	91							
157423	ATU019363	ATL8C20313:1074..993	gap2	ATCEA4S18642	91							
157424	ATU019364	ATL8C47321:1155..522	gap2	ATCEA4S31311	91							
157425	ATU019365	ATL8C37539:200..109	gap2	ATCEA4C80558_1	91							
157426	ATU019366	ATL8C4742:8..296	gap2	ATCEA4S26978	91							
157427	ATU019367	ATL8C40539:583..812	gap2	ATCEA4S29554	91							
157428	ATU019368	ATL8C3513:2062..2445	gap2	ATCEA4S18870, ATCEA4S25087	91, 82							
157429	ATU019369	ATL8S3674:578..660	gap2	ATCEA4S30754	91							
157430	ATU019370	ATL8S380:118..519	gap2	ATCEA4S25241	91							
157431	ATU019371	ATL8C26740:1739..1456	gap2	ATCEA4S26488	91							
157432	ATU019372	ATL8C21994:1153..1034	gap2	ATCEA4C7059_1	91							
157433	ATU019	ATL8C8	gap2	ATCEA4	91							

	373	825:1..70		S26087								
157434	ATU0193374	ATL8S4542:306..222	gap2	ATCEA4C33759_1	91							
157435	ATU0193375	ATL8C10013:1123..755	gap2	ATCEA4S2803	91							
157436	ATU0193376	ATL8C35615:79..1	gap2	ATCEA4S14839	91							
157437	ATU0193377	ATL8S5175:213..1	gap2	ATCEA4S29075	91							
157438	ATU0193378	ATL8S5269:1..202	gap2	ATCEA4S282	91							
157439	ATU0193379	ATL8S5699:396..1	gap2	ATCEA4C41910_1	91							
157440	ATU0193380	ATL8C8711:1353..1	gap2	ATCEA4S36381	91							
157441	ATU0193381	ATL8C26855:694..159	gap2	ATCEA4C53108_1	91							
157442	ATU0193382	ATL8C5039:811..1155	gap2	ATCEA4S32265	91							
157443	ATU0193383	ATL8C32017:1..235	gap2	ATCEA4C22440_1	91							
157444	ATU0193384	ATL8C14747:1316..961	gap2	ATCEA4S178	91							
157445	ATU0193385	ATL8C4787:1150..1540	gap2	ATCEA4S11242	91							
157446	ATU019	ATL8C4	gap2	ATCEA4	91							

	386	7880:1905..2259		S34422								
157447	ATU019387	ATL8S6763:1..162	gap2	ATCEA4S27241	91							
157448	ATU019388	ATL8S6769:377..294	gap2	ATCEA4S36264	91							
157449	ATU019389	ATL8C14761:1592..1944	gap2	ATCEA4S178	91							
157450	ATU019390	ATL8S7015:1..432	gap2	ATCEA4S26154	91							
157451	ATU019391	ATL8C30689:1034..1	gap2	ATCEA4C122501_1	91							
157452	ATU019392	ATL8C47951:5627..5770	gap2	ATCEA4S26325	91							
157453	ATU019393	ATL8C30965:1559..1131	gap2	ATCEA4S25872	91							
157454	ATU019394	ATL8S7309:290..498	gap2	ATCEA4S784	91							
157455	ATU019395	ATL8C37856:523..687	gap2	ATCEA4C6483_1	91							
157456	ATU019396	ATL8C14765:896..1289	gap2	ATCEA4S11794	91							
157457	ATU019397	ATL8C18640:614..734	gap2	ATCEA4S13978	91							
157458	ATU019398	ATL8S7839:31	gap2	ATCEA4C98383	91							

		8..99		_1								
157459	ATU019399	ATL8C47999:1401..1149	gap2	ATCEA4S4199	91							
157460	ATU019400	ATL8S8163:184..59	gap2	ATCEA4S2902	91							
157461	ATU019401	ATL8S8421:343..551	gap2	ATCEA4S12871	91							
157462	ATU019402	ATL8S8743:339..1	gap2	ATCEA4S3903	91							
157463	ATU019403	ATL8C7774:1277..764	gap2	ATCEA4S20309,ATCEA4S11479	91, 85							
157464	ATU019404	ATL8C48822:1..387	gap2	ATCEA4S14341	91							
157465	ATU019405	ATL8C33816:827..575	gap2	ATCEA4S8046	91							
157466	ATU019406	ATL8C47436:471..7	gap2	ATCEA4S7003,ATCEA4S10722	91, 83							
157467	ATU019407	ATL8C13854:136..81	gap2	ATCEA4C20362_1	91							
157468	ATU019408	ATL8C48154:916..589	gap2	ATCEA4S4855	91							
157469	ATU019409	ATL8C194:596..286	gap2	ATCEA4C96913_1	91							
157470	ATU019410	ATL8C28430:70..1	gap2	ATCEA4C6459_1	91							
157471	ATU019	ATL8C4	gap2	ATCEA4	91							

	411	8196:828..527		S30040								
157472	ATU019412	ATL8S7145:244..1	gap2	ATCEA4C3943_1	91							
157473	ATU019413	ATL8C35375:494..719	gap2	ATCEA4C3943_1	91							
157474	ATU019414	ATL8S9798:477..63	gap2	ATCEA4C33733_1	91							
157475	ATU019415	ATL8C11782:1..353	gap2	ATCEA4S32750	91							
157476	ATU019416	ATL8C48213:1..334	gap2	ATCEA4C71014_1	91							
157477	ATU019417	ATL8S9983:252..460	gap2	ATCEA4C7535_1	91							
157478	ATU019418	ATL8C35038:1450..498	gap2	ATCEA4C149879_1	90	ATL8C35038:1450..817	0.97	g2829889	99	611	2.0e-56	(AC002396) Hypothetical protein [Arabidopsis thaliana]
157479	ATU019419	ATL8C28843:999..344	gap2	ATCEA4C50724_1	90	ATL8C28843:670..544	0.97	g3341687	99	414	4.1e-33	(AC003672) putative ras protein [Arabidopsis thaliana]
157480	ATU019420	ATL8C37251:1	gap2	ATCEA4C16817	90	ATL8C37251:1	0.80	g4220481	99	214		(AC006069)

		617..406		_1		603..417						unknown protein [Arabidopsis thaliana]
157481	ATU019421	ATL8C18255:284..763	gap2	ATCEA4S33495	90	ATL8C18255:284..547	0.76	g4539376	99	477	1.1e-16	(AL049525) hypothetical protein [Arabidopsis thaliana]
157482	ATU019422	ATL8C45780:1259..319	gap2	ATCEA4C224_2, ATCEA4C224_1	90, 83	ATL8C45780:1157..319	0.73	g730645	99	626	3.1e-37	40S RIBOSOMAL PROTEIN S15 [Arabidopsis thaliana]
157483	ATU019423	ATL8C47088:829..1	gap2	ATCEA4S30838	90	ATL8C47088:829..229	0.70	g2072338	99	365	4.0e-29	(U95990) similar to Drosophila ISWI protein [Arabidopsis thaliana]
157484	ATU019424	ATL8C44378:1..3771	gap2	ATCEA4S35789, ATCEA4C6545	90, 85	ATL8C44378:194..3671	0.58	g4581131, g2244793	99, 45	86, 2182	1.8e-06, 4.1e-177	(AC005825) putative TMV resist

				1								ance protein; 5'partial [Arabidopsis thaliana]; (Z97336) TMV resistance protein homolog [Arabidopsis thaliana]
157485	ATU019425	ATL8C8178:191..3361	gap2	ATCEA4C20463_1	90	ATL8C8178:191..3010	0.56	g4417302, g3193283	99, 76	533, 1251	6.4e-18, 1.7e-104	(AC006446) hypothetical protein [Arabidopsis thaliana]; (AF069298) similar to Arabidopsis hypothetical protein T14G11.25 (GB: AC0023

												41); nearly identical, may be the same protein [Arabidopsis thaliana]
157486	ATU019426	ATL8C3837:1172..576	gap2	ATCEA4S35840	90	ATL8C3837:1151..579	0.44	g4262157	99	594	6.6e-55	(AC005275) putative calmodulin [Arabidopsis thaliana]
157487	ATU019427	ATL8C46681:1231..319	gap2	ATCEA4S33924	90			g2500485	99	116	0.078	30S RIBOSOMAL PROTEIN S20 [Synechocystis sp.]
157488	ATU019428	ATL8C6971:166..1236	gap2	ATCEA4S20236	90			g2289005	99	324	2.4e-24	(AC002335) hypothetical protein [Arabidopsis thaliana]
157489	ATU019429	ATL8C3858:817..1	gap2	ATCEA4C77676_1	90			g4105794	99	136	1.1e-09	(AF049928) PGP224

												[Petunia x hybrida]
157490	ATU019430	ATL8C4613:1..589	gap2	ATCEA4C118732_1	90			g4726117	99	334	1.6e-13	(AC006436) unknown protein [Arabidopsis thaliana]
157491	ATU019431	ATL8C3846:5323..8481	gap2	ATCEA4S36192	90			g2982435	99	684	9.7e-67	(AL022224) retrotransposon like protein (fragment) [Arabidopsis thaliana]
157492	ATU019432	ATL8C9717:898..1355	gap2	ATCEA4C21285_2	90			g3402700	99	668	8.8e-40	(AC004261) unknown protein [Arabidopsis thaliana]
157493	ATU019433	ATL8C17127:1..3683	gap2	ATCEA4C254_1, ATCEA4S17573	90, 85			g3928862	99	3899	0.0	(AF089710) disease resistance protei

												n RPP8 [Arabidopsis thaliana]
157494	ATU019434	ATL8C3158:1979..8361	gap2	ATCEA4C124090_1	90	ATL8C3158:4313..5828	0.87	g3047063, g4309767	98, 78	180, 2944	1.6e-12, 0.0	(AF058825) No definition line found [Arabidopsis thaliana]; (AC006217) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
157495	ATU019435	ATL8C32703:5856..203	gap2	ATCEA4S7047, ATCEA4S3412	90, 85	ATL8C32703:5763..203	0.73	g2911075	98	2264	6.9e-213	(AL021960) putative protein [Arabidopsis thaliana]
157496	ATU019436	ATL8C714:1370..1	gap2	ATCEA4C73900_1	90			g4204295, g4185599	97, 97	350, 339	5.3e-44, 3.6e-45	(AC003027) lcl|prt_seq No

												definition line found [Arabidopsis thaliana]; (AB010708) Anthocyanin 5-aromatic acyltransferase [Gentiana triflora]
157497	ATU019437	ATL8C42559:1577..1	gap2	ATCEA4S7186, ATCEA4S2178	90, 90	ATL8C42559:1569..201	0.87	g2244752	96	894	9.3e-99	(Z97335) hypothetical protein [Arabidopsis thaliana]
157498	ATU019438	ATL8C8207:505..1	gap2	ATCEA4S36314	90	ATL8C8207:479..155	0.40	g1418329	96	642	1.5e-55	(X98677) zinc finger protein [Arabidopsis thaliana]
157499	ATU019439	ATL8C3276:1..2450	gap2	ATCEA4C703_1,	90, 83	ATL8C3276:318..240	0.88	g4049401, g29146	95, 47	879, 189	1.4e-70, 8.7e-	(AJ131580) glutat

				ATCEA4C703_2		6		98			18	hione transferase AtGST 10 [Arabidopsis thaliana]; (AC003974) hypothetical protein [Arabidopsis thaliana]
157500	ATU019440	ATL8S25347:1..666	gap2	ATCEA4C410_1, ATCEA4S33903	90, 87	ATL8S25347:307..653	0.92	g4107099	94	324	4.8e-20	(AB015141) AHP1 [Arabidopsis thaliana]
157501	ATU019441	ATL8C14095:4008..1	gap2	ATCEA4S81	90	ATL8C14095:3238..233	0.62	g3319360	94	2607	6.4e-229	(AF077408) contains similarity to Vicia faba retrotransposon-like gene (GB:AB007467) [Arabidopsis

												thaliana]
157502	ATU019442	ATL8C19939:1053..1	gap2	ATCEA4C67894_1	90	ATL8C19939:872..70	0.40	g3184285	94	752	1.4e-74	(AC004136) hypothetical protein [Arabidopsis thaliana]
157503	ATU019443	ATL8C811:1612..156	gap2	ATCEA4C119384_1, ATCEA4S33370	90, 86			g2583128	94	556	6.6e-48	(AC002387) hypothetical protein [Arabidopsis thaliana]
157504	ATU019444	ATL8C2756:1..2382	gap2	ATCEA4S24861, ATCEA4C73778_1, ATCEA4C11498_1	90, 86, 84	ATL8C2756:46..2147	0.70	g1711644	93	1052	2.1e-98	PROBABLE ASPARAGINYL-TRNA SYNTHETASE (ASPARAGINE--TRNA LIGASE) (ASNRS) [Synechocystis sp.]
157505	ATU019445	ATL8C47578:1067..1	gap2	ATCEA4S10458	90			g3036805	93	648	9.6e-68	(AL022373) thaumatin-like

												protein [Arabidopsis thaliana]
157506	ATU019446	ATL8C20584:1723..4032	gap2	ATCEA4S33836, ATCEA4S35790	90, 83	ATL8C20584:1723..3805	0.83	g4914368	92	1080	1.2e-89	(AC007584) hypothetical protein similar to T18A10.3 [Arabidopsis thaliana]
157507	ATU019447	ATL8C45554:86..1470	gap2	ATCEA4S4638	90	ATL8C45554:86..1426	0.56	g4914337	92	1058	3.9e-100	(AC005489) F14N23.23 [Arabidopsis thaliana]
157508	ATU019448	ATL8C49959:1..917	gap2	ATCEA4C84552_1	90			g3935186	91	602	8.7e-57	(AC004557) F17L21.29 [Arabidopsis thaliana]
157509	ATU019449	ATL8C10303:4369..1	gap2	ATCEA4S126, ATCEA4S3937	90, 88	ATL8C10303:4326..275	0.61	g4388724, g4263654, g4388825	90, 57, 32	267, 239, 964		(AC006413) putative Athila ORF1 protein [Arabi

												dopsis thaliana]; (AC006136) putative reverse transcriptase [Arabidopsis thaliana]; (AC006528) putative pol polyprotein with reverse transcriptase domain (Pfam: PF00078) [Arabidopsis thaliana]
157510	ATU019450	ATL8C42457:451..3349	gap2	ATCEA4S3937	90			g4325348	90	301	2.9e-30	(AF128394) contains similarity to phosphate

												transporters [Arabidopsis thaliana]
157511	ATU01945 1	ATL8C896:1946..3037	gap2	ATCEA4C15615_1	90			g3377797	90	801	5.3e-75	(AF075597) Similar to 60S ribosome protein L19; coded for by A. thaliana cDNA T04719; coded for by A. thaliana cDNA H36046; coded for by A. thaliana cDNA T44067; coded for by A. thaliana cDNA

												T14056; coded for by A. thaliana cDNA R90691 [Ara... []
157512	ATU019452	ATL8C32511:1..186	gap2	ATCEA4S5412	90			g1532167	88	188	9.5e-11	(U63815) localized according to blastn similarity to EST sequences; therefore, the coding span corresponds only to an area of similarity since the initation codon and stop codon could

												not be precisely determined [Arabidopsis thaliana]
157513	ATU019453	ATL8C197:2568..4233	gap2	ATCEA4S31743	90	ATL8C197:3184..3984	0.75	g2880052	87	1981		(AC002340) putative cytochrome P450 [Arabidopsis thaliana]
157514	ATU019454	ATL8C47151:1599..3270	gap2	ATCEA4S27401	90	ATL8C47151:1746..3232	0.58	g4309868	87	2126	3.3e-161	(AC006527) putative retrotransposon-like orf [Arabidopsis thaliana]
157515	ATU019455	ATL8C4440:1073..2209	gap2	ATCEA4C6465_1, ATCEA4C32492_1	90, 83			g3426041	87	1151	6.8e-104	(AC005168) unknown protein [Arabidopsis thaliana]
157516	ATU019456	ATL8C16301:1	gap2	ATCEA4C14766	90	ATL8C16301:1	0.60	g3201626	86	901	4.4e-101	(AC004669)

		568..1		9_1		463..173						putative protein kinase MAP3K [Arabidopsis thaliana]
157517	ATU019457	ATL8C41268:1..464	gap2	ATCEA4S22576, ATCEA4S35538, ATCEA4C21668_1, ATCEA4S22575, ATCEA4S35965	90, 89, 88, 83, 83			g132825	86	169	1.1e-14	50S RIBOSOMAL PROTEIN CL25, CHLOROPLAST PRECURSOR [Pisum sativum]
157518	ATU019458	ATL8C37416:1696..821	gap2	ATCEA4S31099	90	ATL8C37416:1560..821	0.92	g4512655	85	498		(AC007048) putative protein phosphatase 2C [Arabidopsis thaliana]
157519	ATU019459	ATL8C47869:4191..1	gap2	ATCEA4S27391	90	ATL8C47869:2712..1012, ATL8C47869:4191..3653	0.93, 0.75	g4567296, g3695396	83, 51	507, 892	6.3e-46, 3.5e-83	(AC006918) putative Athila retroelement ORF1

												protein [Arabidopsis thaliana]; (AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
157520	ATU019460	ATL8C3233:1..1924	gap2	ATCEA4C26348_1	90	ATL8C3233:153..1761	0.95	g3193292	82	688	7.5e-48	(AF069298) similar to ATPases associated with various cellular activites (Pfam: AAA.hmm,

												score: 230.91) [Arabidopsis thaliana]
157521	ATU019461	ATL8C22715:2213..552	gap2	ATCEA4C76545_1	90	ATL8C22715:2113..864	0.67	g3319342	82	385	2.0e-28	(AF077407) similar to mitochondrial carrier proteins (Pfam: mit_carr.hmm, score: 79.74 and 42.50) [Arabidopsis thaliana]
157522	ATU019462	ATL8C44100:4947..1	gap2	ATCEA4S951	90	ATL8C44100:4888..40	0.85	g2435519	81	1548	5.0e-113	(AF024504) similar to mouse MEM3 (GB:U47024 and S. cerevisiae vacuolar sorting

												protein 35 (SW;P34110) [Arabidopsis thaliana]
157523	ATU019463	ATL8C10808:1702..1	gap2	ATCEA4C29260_1, ATCEA4S27168	90, 83			g2190547	80	1275	1.7e-142	(AC001229) ESTs gb|T43256,gb|46316,gb|N64930,gb|AA395255,gb|AA404382 come from this gene. [Arabidopsis thaliana]
157524	ATU019464	ATL8C37842:1..850	gap2	ATCEA4C61541_1	90	ATL8C37842:361..850	0.98	g3763921	79	711	4.8e-72	(AC004450) putative pirin protein [Arabidopsis thaliana]
157525	ATU019465	ATL8C24232:853..1	gap2	ATCEA4C7045_1, ATCEA4C7045_2	90, 83	ATL8C24232:739..356	0.71	g4850371	79	1219	2.9e-116	(AB027153) SNF1 related protei

												n kinase [Arabidopsis thaliana]
157526	ATU019466	ATL8C4195:4733..1116	gap2	ATCEA4S81	90	ATL8C4195:4733..2595	0.44	g4567296	79	1717	3.0e-173	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
157527	ATU019467	ATL8C42990:1..1597	gap2	ATCEA4S11082	90			g3695396	79	1585	1.4e-126	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
157528	ATU019468	ATL8C35160:759..1	gap2	ATCEA4C17001_1	90	ATL8C35160:697..1311	0.45	g549706	77	223	1.4e-22	KTI12 PROTEIN [Sacch

												aromyces cerevisiae]
157529	ATU019469	ATL8C35772:2620..844	gap2	ATCEA4S4841	90	ATL8C35772:2331..844	0.60	g3953482, g1497987	76, 58	265, 287	9.1e-32, 7.6e-34	(AC002328) F22O2.27 [Arabidopsis thaliana]; (U62798) SCARECROW [Arabidopsis thaliana]
157530	ATU019470	ATL8C17381:1520..483	gap2	ATCEA4C154481_1, ATCEA4C53113_1	90, 82			g3892054	76	1236	3.3e-131	(AC002330) putative glycosyltransferase [Arabidopsis thaliana]
157531	ATU019471	ATL8C10409:1375..1	gap2	ATCEA4C27038_1	90	ATL8C10409:1063..113	0.72	g4512659	75	1504		(AC006931) putative protein kinase [Arabidopsis thaliana]
157532	ATU019472	ATL8C5646:62	gap2	ATCEA4C22522	90	ATL8C5646:38	0.65	g2499057	75	154		THYROID

		2..1		_1		9..31						RECEPTOR INTERACTING PROTEIN 4 (TRIP4) [Homo sapiens]
157533	ATU019473	ATL8C43596:1813..390	gap2	ATCEA4C47813_1	90	ATL8C43596:1547..390	0.63	g4454464	75	819		(AC006234) unknown protein [Arabidopsis thaliana]
157534	ATU019474	ATL8C15325:646..1052	gap2	ATCEA4S36314	90	ATL8C15325:672..996	0.57	g1418329	75	510	1.3e-47	(X98677) zinc finger protein [Arabidopsis thaliana]
157535	ATU019475	ATL8C32536:1..876	gap2	ATCEA4C43660_1	90	ATL8C32536:187..876	0.41	g3785983	74	308	1.7e-29	(AC005560) hypothetical protein [Arabidopsis thaliana]
157536	ATU019476	ATL8C44675:2824..124	gap2	ATCEA4C2176_1, ATCEA4	90, 87			g4581108	74	3610	1.5e-302	(AC005825) putative

				S7841								chloroplast outer membrane protein 86,also very similar to GTP-inding protein from pea (GB:L36857) [Arabidopsis thaliana]
157537	ATU019477	ATL8S23199:376..1	gap2	ATCEA4C38121_1	90	ATL8S23199:351..67	0.96	g4678952	73	491	7.4e-48	(AL049711) putative protein [Arabidopsis thaliana]
157538	ATU019478	ATL8C5675:1..3210	gap2	ATCEA4S27401	90	ATL8C5675:18..3186	0.88	g4309767	72	3078		(AC006217) putative Athila retroelement ORF1 protein [Arabidopsis thalia

												na]
157539	ATU019479	ATL8C31387:5856..651	gap2	ATCEA4S27399, ATCEA4S27391	90, 87	ATL8C31387:4018..651	0.55	g4773908	72	2026	2.3e-183	(AF147259) No definition line found [Arabidopsis thaliana]
157540	ATU019480	ATL8C36870:1472..3063	gap2	ATCEA4C33087_1	90			g4558556	72	692	4.1e-70	(AC007138) predicted protein of unknown function [Arabidopsis thaliana]
157541	ATU019481	ATL8C10268:1..1615	gap2	ATCEA4S33179, ATCEA4S27666	90, 88			g4263062	71	371		(AC005142) hypothetical protein [Arabidopsis thaliana]
157542	ATU019482	ATL8C36417:1..1100	gap2	ATCEA4C51704_1	90	ATL8C36417:216..1100	0.68	g3894193	68	506	8.2e-37	(AC005662) putative strictosidine synthase

												[Arabidopsis thaliana]
157543	ATU019483	ATL8C36588:1190..1	gap2	ATCEA4C2108_1, ATCEA4C2108_6, ATCEA4C2108_2	90, 89, 89			g1850546	68	692	4.6e-67	(U88045) syntaxin related protein AtVam3p [Arabidopsis thaliana]
157544	ATU019484	ATL8C16834:1..2027	gap2	ATCEA4S34555	90	ATL8C16834:536..1987	0.83	g113297	66	86	5.3e-07	ACTIN [Kluyveromyces lactis]
157545	ATU019485	ATL8C5938:368..1862	gap2	ATCEA4S9065	90	ATL8C5938:409..1646	0.82	g4056431	66	1317		(AC005990) Similar to gb|AJ002532 endo-polygalacturonase from Arabidopsis thaliana and is a member of the polygalacturonase

												family PF|00295. [Arabidopsis thaliana]
157546	ATU019486	ATL8C42860:1155..1	gap2	ATCEA4S35522, ATCEA4S33031	90, 82	ATL8C42860:1111..421	0.69	g4584536	66	937	1.2e-80	(AL049608) cytochrome p450 like protein [Arabidopsis thaliana]
157547	ATU019487	ATL8C45799:1..920	gap2	ATCEA4C15468_2, ATCEA4S2457	90, 85	ATL8C45799:324..920	0.68	g1491712	66	124	8.2e-07	(X99961) unknown [Homo sapiens]
157548	ATU019488	ATL8C8555:2566..698	gap2	ATCEA4S33217	90	ATL8C8555:2391..934	0.67	g1076281	66	1248	3.1e-143	1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase (EC 3.1.4.11) - Arabidopsis thaliana [Arabi

												dopsis thaliana]
157549	ATU019489	ATL8C26687:1..1427	gap2	ATCEA4S12925	90			g4544433	66	97	0.030	(AC006955) hypothetical protein [Arabidopsis thaliana]
157550	ATU019490	ATL8C46122:1139..1	gap2	ATCEA4C5474_1	90	ATL8C46122:1118..82	0.80	g2244949	65	631	1.0e-64	(Z97339) similarity to ORF - Lilium longiflorum [Arabidopsis thaliana]
157551	ATU019491	ATL8C21853:2692..1	gap2	ATCEA4S12828	90	ATL8C21853:2607..393	0.74	g3805761, g4586066	65, 40	78, 813	1.2e-05, 1.1e-84	(AC005693) unknown protein [Arabidopsis thaliana]; (AC006194) putative pol polyprotein, 3' partial

												[Arabidopsis thaliana]
157552	ATU019492	ATL8C30875:1565..1	gap2	ATCEA4S23799	90	ATL8C30875:1565..11	0.63	g4417303	65	1125	1.2e-100	(AC006446) putative En/Spm transposon protein [Arabidopsis thaliana]
157553	ATU019493	ATL8C11873:1781..1	gap2	ATCEA4C17246_1	90			g4678386	65	179	1.8e-18	(AL049656) putative protein [Arabidopsis thaliana]
157554	ATU019494	ATL8C35143:1..1083	gap2	ATCEA4C119184_1, ATCEA4C20952_1	90, 89	ATL8C35143:53..917	0.91	g1731101	64	124	6.6e-10	HYPOTHETICAL 29.7 KD PROTEIN IN FOLD-AHRC INTERGENIC REGION [Bacillus subtilis]
157555	ATU019495	ATL8C179:1..1167	gap2	ATCEA4S35772	90	ATL8C179:47..800	0.87	g4115371	64	1357		(AC005967) unknow

												n protein [Arabidopsis thaliana]
157556	ATU019496	ATL8C44180:1..1198	gap2	ATCEA4C143757_1, ATCEA4S35274	90, 88	ATL8C44180:140..1033	0.73	g4558564	64	1098	3.4e-111	(AC007138) predicted protein of unknown function [Arabidopsis thaliana]
157557	ATU019497	ATL8C25594:1027..31	gap2	ATCEA4S9741, ATCEA4C59665_1	90, 85	ATL8C25594:620..127	0.63	g4680697	64	132	1.5e-13	(AF132963) CGI-29 protein [Homo sapiens]
157558	ATU019498	ATL8C40589:1..3509	gap2	ATCEA4S178, ATCEA4S253	90, 85			g4557068	64	2327	6.1e-256	(AC007045) putative polpolyprotein [Arabidopsis thaliana]
157559	ATU019499	ATL8C34224:892..1	gap2	ATCEA4C1708_1, ATCEA4C1708_2,	90, 90, 86	ATL8C34224:735..60	0.77	g4220451	63	1054	9.3e-100	(AC006216) Identical to gb|AF054906

				ATCEA4C1708_4								myrosinase-binding protein homolog from Arabidopsis thaliana. ESTs gb|F15276 and gb|F15275 come from this gene. [Arabidopsis thaliana]
157560	ATU019500	ATL8C13405:1394..1	gap2	ATCEA4C56288_4, ATCEA4S29632	90, 86	ATL8C13405:872..289	0.73	g1781299	63	233	3.5e-19	(Y09506) transformer-SR ribonucleoprotein [Nicotiana tabacum]
157561	ATU019501	ATL8C25842:1..1933	gap2	ATCEA4C8999_1, ATCEA4C58034_1	90, 86	ATL8C25842:201..1527	0.74	g2190547	62	489	6.6e-31	(AC001229) ESTs gb|T43256,gb|46316,gb|N6

												4930,gb|AA395255,gb|AA404382 come from this gene. [Arabidopsis thaliana]
157562	ATU019502	ATL8C34179:795..330	gap2	ATCEA4C11974_1	90	ATL8C34179:795..334	0.74	g4678376	62	300	1.2e-26	(AL049656) putative protein [Arabidopsis thaliana]
157563	ATU019503	ATL8C25328:1..2353	gap2	ATCEA4S13054	90			g4733958	62	100	0.012	(AC007294) unknown protein [Arabidopsis thaliana]
157564	ATU019504	ATL8C46713:1..1220	gap2	ATCEA4S4598, ATCEA4S11983	90, 85	ATL8C46713:47..1160	0.89	g4914368	61	1198	2.1e-108	(AC007584) hypothetical protein similar to T18A10.3 [Arabidopsis

												thaliana]
157565	ATU019505	ATL8C16398:1..3731	gap2	ATCEA4S6692	90	ATL8C16398:213..3467	0.67	g2465923	61	722	9.5e-74	(AF024648) receptor-like serine/threonine kinase [Arabidopsis thaliana]
157566	ATU019506	ATL8C29237:2065..1402	gap2	ATCEA4S14366	90	ATL8C29237:2013..1402	0.45	g4309703	61	227	5.3e-22	(AC006266) putative transposon protein [Arabidopsis thaliana]
157567	ATU019507	ATL8C1436:1753..3914	gap2	ATCEA4S3937, ATCEA4S179	90, 89			g4263541, g4773910	61, 37	602, 286	2.0e-47, 1.1e-10	(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AF147259) No defini

												tion line found [Arabidopsis thaliana]
157568	ATU019508	ATL8C37935:2463..1601	gap2	ATCEA4C119248_2, ATCEA4C119248_1	90, 87	ATL8C37935:2121..1735	0.96	g4415913	60	319	3.6e-30	(AC006282) unknown protein [Arabidopsis thaliana]
157569	ATU019509	ATL8C7445:1..2507	gap2	ATCEA4S46, ATCEA4C125929_1	90, 85	ATL8C7445:282..2352	0.89	g2828352	60	455	6.1e-56	(AB000779) phospholipase D [Rattus norvegicus]
157570	ATU019510	ATL8C14478:1..2140	gap2	ATCEA4S23799	90	ATL8C14478:253..2140	0.73	g4417303	60	1136	2.8e-84	(AC006446) putative En/Spm transposon protein [Arabidopsis thaliana]
157571	ATU019511	ATL8C2260:2455..1	gap2	ATCEA4S3937, ATCEA4S11082	90, 86			g4773910, g3047073	60, 46	327, 1124	1.9e-30, 6.3e-76	(AF147259) No definition line

												found [Arabidopsis thaliana]; (AF058825) contains similarity to retrotransposon-like proteins [Arabidopsis thaliana]
157572	ATU019512	ATL8C41696:1..1258	gap2	ATCEA4C34404_1	90			g3386609	59	265	1.1e-18	(AC004665) putative DNA-binding protein [Arabidopsis thaliana]
157573	ATU019513	ATL8C37326:1114..298	gap2	ATCEA4S1651	90	ATL8C37326:999..319	0.62	g4914426	58	143		(AL050351) putative protein [Arabidopsis thaliana]

157574	ATU019514	ATL8C24675:3462..1	gap2	ATCEA4S27399	90	ATL8C24675:2715..636	0.42	g4773908, g3738337	55, 40	2138, 1251	4.3e-194, 2.8e-133	(AF147259) No definition line found [Arabidopsis thaliana]; (AC005170) putative reverse transcriptase [Arabidopsis thaliana]
157575	ATU019515	ATL8C4994:585..1	gap2	ATCEA4C33277_1	90			g4678232	55	256	1.4e-21	(AC007265) hypothetical protein [Arabidopsis thaliana]
157576	ATU019516	ATL8C5772:1..560	gap2	ATCEA4S31511	90	ATL8C5772:109..556	0.97	g2342686	54	545		(AC000106) Similar to Saccharomyces hypothetical protein

												YDR051c (gb|Z49209). ESTs gb|T44436,gb|42252 come from this gene. [Arabidopsis thaliana]
157577	ATU019517	ATL8C16755:1..1960	gap2	ATCEA4C26580_1	90	ATL8C16755:452..1960	0.87	g2654559	54	291	4.4e-16	(AF006621) embryonic lung protein [Homo sapiens]
157578	ATU019518	ATL8C47678:1240..1	gap2	ATCEA4S13674	90	ATL8C47678:1232..67	0.70	g111785	54	132	1.9e-06	DNA-3-METHYLADENINE GLYCOSIDASE I (3-METHYLADENINE-DNA GLYCOSYLASE I, CONSTITUTIVE) (TAG I) [Escherichia

												coli]
157579	ATU019519	ATL8C34505:1..1854	gap2	ATCEA4S1006	90	ATL8C34505:131..1854	0.63	g4263063	54	1302	3.7e-96	(AC005142) hypothetical protein [Arabidopsis thaliana]
157580	ATU019520	ATL8C31096:904..306	gap2	ATCEA4S33410	90			g4678221	53	213	9.3e-18	(AC007135) hypothetical protein [Arabidopsis thaliana]
157581	ATU019521	ATL8C20263:42..1089	gap2	ATCEA4S29930	90	ATL8C20263:42..1016	0.66	g2980765	52	141	1.5e-15	(AL022198) hypothetical protein [Arabidopsis thaliana]
157582	ATU019522	ATL8C15995:3104..1	gap2	ATCEA4C26920_1	90	ATL8C15995:2765..560	0.84	g2262111	51	512	7.1e-51	(AC002343) ribitol dehydrogenase isolog [Arabidopsis thaliana]
157583	ATU019	ATL8C9	gap2	ATCEA4	90	ATL8C9	0.73	g12062	51	162		SERINE

	523	200:90..971		S6738		200:90..971		1				/THREONINE-PROTEIN KINASE FUSED [Drosophila melanogaster]
157584	ATU019524	ATL8C19601:835..1	gap2	ATCEA4S3042	90	ATL8C19601:685..40	0.64	g4006851	51	877	5.8e-90	(Z9970 7) cytochrome P450-like protein [Arabidopsis thaliana]
157585	ATU019525	ATL8C4386:645..1	gap2	ATCEA4C738_1, ATCEA4C739_1	90, 83	ATL8C4386:621..21	0.98	g113512	50	430	2.3e-36	FLORAL HOMEOTIC PROTEIN AGL2 [Arabidopsis thaliana]
157586	ATU019526	ATL8C38768:65..470	gap2	ATCEA4C272_1, ATCEA4S35512, ATCEA4S36234	90, 87, 85	ATL8C38768:65..424	0.69	g1076427	50	161	2.9e-16	ubiquitin--protein ligase (EC 6.3.2.19) - Arabidopsis thaliana []
157587	ATU019	ATL8C2	gap2	ATCEA4	90,	ATL8C2	0.66	g23425	50	119	1.8e-	(AJ000

	527	0341:773..1		C10353_1, ATCEA4S15660, ATCEA4S1968	90, 88	0341:399..215		44			09	685) dihydroneopterin aldolase [Streptococcus pyogenes]
157588	ATU019528	ATL8C10970:6730..3884	gap2	ATCEA4S12870	90			g2828296	50	769	7.3e-85	(AL021687) RNase L inhibitor [Arabidopsis thaliana]
157589	ATU019529	ATL8S9810:231..521	gap2	ATCEA4S8262, ATCEA4C23863_1	90, 85	ATL8S9810:269..485	0.88	g4544434	49	213	6.1e-22	(AC006955) putative DNA-directed RNA polymerase II [Arabidopsis thaliana]
157590	ATU019530	ATL8C24840:5253..4299	gap2	ATCEA4S35401	90	ATL8C24840:5190..4299	0.84	g3482919	49	512	9.6e-44	(AC003970) Putative protein kinase [Arabidopsis thalia

												na]
157591	ATU019531	ATL8C49433:1518..1	gap2	ATCEA4S35953	90	ATL8C49433:1513..168	0.67	g4836872	49	652	4.8e-75	(AC007260) lcl|prt_seq No definition line found [Arabidopsis thaliana]
157592	ATU019532	ATL8C24654:3378..1	gap2	ATCEA4C29279_1, ATCEA4S31415	90, 85	ATL8C24654:3346..68	0.83	g4432841	48	777	1.8e-48	(AC006283) hypothetical protein [Arabidopsis thaliana]
157593	ATU019533	ATL8C9353:1249..1	gap2	ATCEA4S30150	90	ATL8C9353:841..373	0.66	g3176715	48	596	8.7e-60	(AC002392) putative receptor-like protein kinase [Arabidopsis thaliana]
157594	ATU019534	ATL8C12033:1..1202	gap2	ATCEA4S4890	90	ATL8C12033:280..1202	0.53	g3169171	48	543	6.6e-35	(AC004401) putative serine carboxypepti

												dase I [Arabidopsis thaliana]
157595	ATU019535	ATL8C38726:998..1	gap2	ATCEA4S1722	90			g4585977	48	295	5.0e-15	(AC005287) Unknown protein [Arabidopsis thaliana]
157596	ATU019536	ATL8C43534:965..1	gap2	ATCEA4S6273	90			g2829911	48	90		(AC002291) Unknown protein [Arabidopsis thaliana]
157597	ATU019537	ATL8C23462:704..3209	gap2	ATCEA4S3422	90	ATL8C23462:704..2648	0.72	g1084442	47	517	7.3e-43	cellulase (EC 3.2.1.4) - European elder [Sambucus nigra]
157598	ATU019538	ATL8C37132:1083..367	gap2	ATCEA4S27268, ATCEA4S27267, ATCEA4S29057,	90, 88, 88, 88, 88, 87			g4107101	47	202		(AB015142) AHP2 [Arabidopsis thaliana]

				ATCEA4S36114, ATCEA4S25174, ATCEA4C408_1								
157599	ATU019539	ATL8C17533:954..206	gap2	ATCEA4S34147, ATCEA4S31458	90, 88	ATL8C17533:925..246	0.81	g4153896	46	238	7.6e-23	(AB022209) ribonucleoprotein F [Rattus norvegicus]
157600	ATU019540	ATL8C45372:130..1	gap2	ATCEA4C1329_1	90			g2129742	46	132	1.5e-09	stress-induced protein OZI1 precursor - Arabidopsis thaliana [Arabidopsis thaliana]
157601	ATU019541	ATL8C1301:584..2594	gap2	ATCEA4S35822	90			g3335350, g4587997	46, 43	218, 143	1.4e-19, 1.1e-10	(AC004512) Similar to gb|Z84386 anthranilate N-hydroxycinna

												moyl/benzoyltransferase from Dianthus caryophyllus. [Arabidopsis thaliana]; (AF085279) hypothetical protein [Arabidopsis thaliana]
157602	ATU019542	ATL8C23749:355..1	gap2	ATCEA4C75309_3, ATCEA4S31669	90, 85			g4531440	46	244	3.9e-22	(AC006224) unknown protein [Arabidopsis thaliana]
157603	ATU019543	ATL8C41429:2064..1	gap2	ATCEA4S11168	90			g2191178	45	802	9.7e-75	(AF007270) contains similarity to MIPP proteins [Arabi

												dopsis thaliana]
157604	ATU019544	ATL8C39483:753..1	gap2	ATCEA4S940, ATCEA4C9170_1	90, 85	ATL8C39483:456..66	0.88	g3785998	44	358	4.2e-35	(AC005499) unknown protein [Arabidopsis thaliana]
157605	ATU019545	ATL8C39095:1..956	gap2	ATCEA4S1201	90	ATL8C39095:40..834	0.86	g4559366	44	876	4.8e-88	(AC006585) putative tyrosine transaminase [Arabidopsis thaliana]
157606	ATU019546	ATL8C13209:1..1105	gap2	ATCEA4S35513, ATCEA4S33017	90, 90	ATL8C13209:97..1105	0.75	g266410	44	308	2.5e-25	CDC2+/CDC28-RELATED PROTEIN KINASE R2 [Oryza sativa]
157607	ATU019547	ATL8C43861:939..1	gap2	ATCEA4S5996	90	ATL8C43861:622..82	0.51	g4455215	44	193		(AL035440) putative homeodomain protein [Arabi

												dopsis thaliana]
157608	ATU019548	ATL8C29460:178..650	gap2	ATCEA4S15272	90			g1944132	44	705	5.1e-40	(AB002560) CUC2 [Arabidopsis thaliana]
157609	ATU019549	ATL8C5273:782..1	gap2	ATCEA4S81	90	ATL8C5273:705..390	0.98	g4567296	43	982	9.5e-94	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
157610	ATU019550	ATL8C8371:203..973	gap2	ATCEA4S34906	90	ATL8C8371:301..868	0.67	g4835229	43	964	2.5e-79	(AL049862) putative protein [Arabidopsis thaliana]
157611	ATU019551	ATL8C10285:1258..360	gap2	ATCEA4C119071_1	90	ATL8C10285:736..489	0.45	g2498731	43	345		PROBABLE NADP-DEPENDENT OXIDOREDUCTASE P1 [Arabidopsis thalia

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157612	ATU019552	ATL8C33089:1422..1	gap2	ATCEA4S13708, ATCEA4S1946	90, 88			g2829910	43	1659	2.0e-152	(AC002291) Unknown protein, contains regulator of chromosome condensation motifs [Arabidopsis thaliana]
157613	ATU019553	ATL8C13517:1..2818	gap2	ATCEA4C233_1, ATCEA4C233_2	90, 86			g4926821, g3549626, g4826399	43, 39, 38	311, 1345, 1208	7.6e-28, 2.7e-138, 3.2e-126	(AC004135) T17H7.6 [Arabidopsis thaliana]; (AJ009696) wall-associated kinase 1 [Arabidopsis thaliana]; (AJ012423) wall-associated kinase

												2 [Arabidopsis thaliana]
157614	ATU019554	ATL8C1585:3198..66	gap2	ATCEA4C34501_1	90	ATL8C1585:3198..138	0.76	g4263544	42	2081	1.6e-172	(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
157615	ATU019555	ATL8C182:2356..760	gap2	ATCEA4S29581	90	ATL8C182:2356..760	0.55	g2244902	42	1036		(Z97339) allene oxide synthase [Arabidopsis thaliana]
157616	ATU019556	ATL8C41571:85..548	gap2	ATCEA4S682	90	ATL8C41571:378..472	0.94	g4510401	41	198	5.7e-22	(AC006587) putative general negative regulator of transcription [Arabidopsis thalia

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157617	ATU019557	ATL8C38617:293..1224	gap2	ATCEA4C58800_1	90	ATL8C38617:391..1128	0.62	g2342736	41	366	2.8e-23	(AC002341) unknown protein [Arabidopsis thaliana]
157618	ATU019558	ATL8C45520:1111..1	gap2	ATCEA4S6348	90			g4454448	41	224	7.5e-23	(AC006234) hypothetical protein [Arabidopsis thaliana]
157619	ATU019559	ATL8C1032:1..890	gap2	ATCEA4S3937	90			g4773910	41	331	2.3e-32	(AF147259) No definition line found [Arabidopsis thaliana]
157620	ATU019560	ATL8C9590:1213..1	gap2	ATCEA4S9859	90	ATL8C9590:1213..32	0.90	g2832661	40	331	6.4e-23	(AL021710) pherophorin - like protein [Arabidopsis thaliana]
157621	ATU019	ATL8C3	gap2	ATCEA4	90	ATL8C3	0.90	g25297	40	455	2.3e-	(AF001

	561	2640:1..987		S15209		2640:90..947		07			36	434) Hpast [Homo sapiens]
157622	ATU019562	ATL8C3241:701..1	gap2	ATCEA4S2408	90	ATL8C3241:688..195	0.78	g2894595	40	89	1.0e-07	(AL021889) putative protein [Arabidopsis thaliana]
157623	ATU019563	ATL8C21662:879..2155	gap2	ATCEA4C7733_1	90	ATL8C21662:1104..2091	0.49	g3157932	40	965	6.5e-80	(AC002131) Similar to hypothetical protein HYP1 gb|Z97338 from A. thaliana. [Arabidopsis thaliana]
157624	ATU019564	ATL8C37340:1..382	gap2	ATCEA4S13415	90	ATL8C37340:100..382	0.46	g3377813	40	225		(AF076275) No definition line found [Arabidopsis thaliana]
157625	ATU019	ATL8C3	gap2	ATCEA4	90			g25220	40	135	3.9e-	(AB007

	565	3548:160..1402		S30501				15			08	638) metabolite transport protein [Bacillus subtilis]
157626	ATU019566	ATL8C47879:555..1	gap2	ATCEA4S22547, ATCEA4S26683	90, 90	ATL8C47879:358..13	0.98	g2660677	39	523	2.0e-55	(AC002342) unknown protein [Arabidopsis thaliana]
157627	ATU019567	ATL8C11430:949..1808	gap2	ATCEA4S1114, ATCEA4S12913	90, 86	ATL8C11430:950..1691	0.93	g3169172	39	509	1.2e-20	(AC004401) putative serine carboxypeptidase I [Arabidopsis thaliana]
157628	ATU019568	ATL8C50078:788..1	gap2	ATCEA4S12182, ATCEA4C6181_1, ATCEA4S642	90, 89, 84	ATL8C50078:708..68	0.89	g4588001	39	621	7.0e-65	(AF085279) hypothetical Ser-Thr protein kinase [Arabidopsis thalia

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157629	ATU019569	ATL8C22683:1011..1	gap2	ATCEA4C7844_1	90	ATL8C22683:672..61	0.51	g833835	39	413	3.6e-43	(U26025) amygdalin hydrolase isoform AH I precursor [Prunus serotina]
157630	ATU019570	ATL8S27195:767..1	gap2	ATCEA4C36704_1	90	ATL8S27195:564..361	0.48	g2129767	39	644	3.5e-70	vacuolar processing enzyme (EC 3.4.22.-) isozyme beta precursor - Arabidopsis thaliana [Arabidopsis thaliana]
157631	ATU019571	ATL8C36636:1..1425	gap2	ATCEA4S3183	90			g2244963	39	419	1.3e-38	(Z97340) hypothetical protein [Arabidopsis thaliana]

157632	ATU019572	ATL8C41980:375..3834	gap2	ATCEA4C57640_1	90			g4926870	39	223	4.8e-16	(AC007509) putative reverse transcriptase [Arabidopsis thaliana]
157633	ATU019573	ATL8C3361:1..1370	gap2	ATCEA4C40198_1, ATCEA4S35904	90, 89	ATL8C3361:53..610	0.72	g3510249	38	973	1.6e-100	(AC005310) unknown protein [Arabidopsis thaliana]
157634	ATU019574	ATL8S3606:559..1	gap2	ATCEA4C14478_1	90			g1362055	38	797	3.4e-68	phosphogluconate dehydrogenase (decarboxylating) (EC 1.1.1.44) - alfalfa [Medicago sativa subsp. sativa]
157635	ATU019575	ATL8C44777:1	gap2	ATCEA4S11168	90			g2191178	38	1007	1.6e-81	(AF007270)

		329..1										contains similarity to MIPP proteins [Arabidopsis thaliana]
157636	ATU019576	ATL8C42218:1..868	gap2	ATCEA4S7845	90	ATL8C42218:2..265	0.79	g4538973	37	253	4.0e-22	(AL049487) hypothetical protein [Arabidopsis thaliana]
157637	ATU019577	ATL8C34309:759..4870	gap2	ATCEA4S126	90	ATL8C34309:3024..4817	0.69	g3785984	37	1277	6.9e-134	(AC005560) putative reverse transcriptase [Arabidopsis thaliana]
157638	ATU019578	ATL8C4940:1..706	gap2	ATCEA4C28274_1	90	ATL8C4940:286..532	0.62	g2832300	37	295	1.7e-30	(AF044285) adenosine-5'-phosphosulfate-kinase [Catha

												ranthus roseus]
157639	ATU019579	ATL8C12348:1..2900	gap2	ATCEA4S253	90	ATL8C12348:124..1508	0.60	g4512629	37	137	1.0e-12	(AC004793) EST gb|Z33866 comes from this gene. [Arabidopsis thaliana]
157640	ATU019580	ATL8C37634:1..896	gap2	ATCEA4S34006	90	ATL8C37634:205..512	0.43	g4835789	37	172	6.2e-08	(AC007296) Strong similarity to []
157641	ATU019581	ATL8C25456:715..1	gap2	ATCEA4S8046	90	ATL8C25456:680..38	0.60	g3687833	36	42	0.061	(AF069737) notchless [Xenopus laevis]
157642	ATU019582	ATL8C25385:1184..1	gap2	ATCEA4C117791_1	90	ATL8C25385:1047..122	0.60	g4914440	36	468	1.1e-42	(AL050351) phenylalanyl-trna synthetase-like protein [Arabidopsis thaliana]

157643	ATU019583	ATL8C36581:382..1	gap2	ATCEA4C564_2, ATCEA4C564_1	90, 87			g1708062	36	401	2.0e-30	GLUTATHIONE PEROXIDASE HOMOLOG PRECURSOR [Arabidopsis thaliana]
157644	ATU019584	ATL8C42975:128..1595	gap2	ATCEA4S178, ATCEA4S253	90, 89	ATL8C42975:872..1489	0.92	g4733999	35	119	2.6e-08	(AC007187) hypothetical protein [Arabidopsis thaliana]
157645	ATU019585	ATL8C20920:305..1367	gap2	ATCEA4C47813_1	90	ATL8C20920:382..1289	0.90	g4454464	35	285	7.1e-18	(AC006234) unknown protein [Arabidopsis thaliana]
157646	ATU019586	ATL8C8195:1443..1	gap2	ATCEA4S29591	90	ATL8C8195:1267..162	0.83	g4850296	35	793	1.0e-71	(AL049876) RPP1-WsA-like disease resistance protein [Arabidopsis

												thaliana]
157647	ATU019587	ATL8C39206:1626..2152	gap2	ATCEA4C423_1, ATCEA4S2387, ATCEA4C423_4, ATCEA4S27804	90, 89, 84, 83	ATL8C39206:1636..2152	0.49	g3928543	35	757	2.5e-78	(AB016819) UDP-glucose glucosyltransferase [Arabidopsis thaliana]
157648	ATU019588	ATL8S17906:532..1	gap2	ATCEA4C17669_1	90			g1352316	35	165	1.8e-15	DR1 PROTEIN HOMOLOG [Arabidopsis thaliana]
157649	ATU019589	ATL8C48084:1..837	gap2	ATCEA4C27193_1, ATCEA4S20072	90, 86	ATL8C48084:9..798	0.99	g3582436	34	881	1.8e-74	(AB017502) beta-D-glucan exohydrolase [Nicotiana tabacum]
157650	ATU019590	ATL8S15752:543..1	gap2	ATCEA4C17883_1	90	ATL8S15752:416..537	0.59	g4099831	34	382	5.5e-26	(U90264) bifunctional nuclease bfn1 [Arabidopsis thalia

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157651	ATU019591	ATL8C2319:631..1125	gap2	ATCEA4C534_1	90	ATL8C2319:1035..968	0.58	g1546696	34	493	5.5e-47	(X98807) peroxidase ATP21a [Arabidopsis thaliana]
157652	ATU019592	ATL8C17167:1..604	gap2	ATCEA4C26502_1, ATCEA4C118921_1	90, 88			g4914457	34	899	3.5e-88	(AL050400) putative protein [Arabidopsis thaliana]
157653	ATU019593	ATL8S72:494..1	gap2	ATCEA4C73457_1	90			g2911049	34	742	4.9e-76	(AL021961) glucosyltransferase - like protein [Arabidopsis thaliana]
157654	ATU019594	ATL8C47554:1..1338	gap2	ATCEA4C8403_1	90	ATL8C47554:355..1273	0.55	g3819697	33	582	4.6e-50	(AJ009608) BnMAP4K alpha1 [Brassica napus]
157655	ATU019595	ATL8C42141:1263..4	gap2	ATCEA4C1653_2,	90, 82	ATL8C42141:1067..4	0.51	g2708813	33	641	2.3e-39	(AF037362) ATA20

		4		ATCEA4S28457		4						[Arabidopsis thaliana]
157656	ATU019596	ATL8S13315:1..523	gap2	ATCEA4S4840	90			g2494144	33	719	3.4e-51	(AC002329) predicted leucine-rich protein [Arabidopsis thaliana]
157657	ATU019597	ATL8C46087:1..701	gap2	ATCEA4S29295, ATCEA4C116780_2, ATCEA4S28965	90, 90, 82			g3434975	33	269	3.6e-29	(AB008107) ethylene responsive element binding factor 5 [Arabidopsis thaliana]
157658	ATU019598	ATL8S11902:543..1	gap2	ATCEA4C8321_1	90	ATL8S11902:293..100	0.97	g4580392	32	194	9.6e-16	(AC007171) hypothetical protein [Arabidopsis thaliana]
157659	ATU019599	ATL8C9199:1..658	gap2	ATCEA4S34659	90	ATL8C9199:48..392	0.86	g4850398	32	296		(AC007357) Strong

												similarity to []
157660	ATU019600	ATL8S28293:661..1	gap2	ATCEA4C42173_1	90	ATL8S28293:628..293	0.86	g3157937	32	351	9.0e-35	(AC002131) Identical to aspartic proteinase cDNA gb|U51036 from A. thaliana. ESTs gb|N96313, gb|T21893, gb|R30158, gb|T21482, gb|T43650, gb|R64749, gb|R65157, gb|T88269, gb|T44552, gb|T22542, gb|T76533, gb|T44350, gb|Z34591,

												gb|AA728734, gb... []
157661	ATU019601	ATL8C31566:2050..1	gap2	ATCEA4C4630_1	90	ATL8C31566:1898..8	0.62	g4510339	32	1859	7.3e-179	(AC006921) putative ABC transporter protein [Arabidopsis thaliana]
157662	ATU019602	ATL8C31780:2434..1763	gap2	ATCEA4C116496_1, ATCEA4S14039	90, 86			g4587527	32	396	9.9e-41	(AC007060) Strong similarity to F19I3.2 []
157663	ATU019603	ATL8S4319:1..155	gap2	ATCEA4C112331_1	90			g4680318	32	182	4.3e-13	(AF124376) 30S ribosomal protein S7 [Brassica napus]
157664	ATU019604	ATL8C41950:3335..2545	gap2	ATCEA4S3087	90			g2864620	32	182	6.0e-09	(AL021811) hypothetical protein [Arabidopsis thaliana]

157665	ATU019605	ATL8C49835:1757..1205	gap2	ATCEA4C70158_1	90			g3451078	32	317	4.8e-25	(AL031326) putative protein [Arabidopsis thaliana]
157666	ATU019606	ATL8C31909:1603..3204	gap2	ATCEA4C1602_2	90			g2736147	32	205	5.0e-07	(AF021804) fatty acid hydroxylase Fah1p [Arabidopsis thaliana]
157667	ATU019607	ATL8C9783:595..84	gap2	ATCEA4S400	90	ATL8C9783:441..84	0.93	g2702281	31	330	9.1e-34	(AC003033) putative protein disulfide isomerase precursor [Arabidopsis thaliana]
157668	ATU019608	ATL8C3380:768..1	gap2	ATCEA4S25030	90			g3075392	31	395	2.3e-41	(AC004484) putative steroid dehydrogenas

												e [Arabidopsis thaliana]
157669	ATU019609	ATL8C20294:1..2448	gap2	ATCEA4C8544_1	90	ATL8C20294:132..2087	0.97	g3935180	30	1993	4.0e-162	(AC004557) F17L21.23 [Arabidopsis thaliana]
157670	ATU019610	ATL8C6747:397..1096	gap2	ATCEA4C11855_1	90	ATL8C6747:445..978	0.91	g4586029	30	316	2.2e-17	(AC007109) putative protein kinase [Arabidopsis thaliana]
157671	ATU019611	ATL8S17298:461..1	gap2	ATCEA4C17843_1	90	ATL8S17298:392..32	0.59	g3935141	30	701	1.7e-68	(AC005106) T25N20.5 [Arabidopsis thaliana]
157672	ATU019612	ATL8C2273:2518..1	gap2	ATCEA4S11406	90	ATL8C2273:2518..1109	0.58	g4773910	30	147	1.5e-05	(AF147259) No definition line found [Arabidopsis thaliana]
157673	ATU019	ATL8C9	gap2	ATCEA4	90	ATL8C9	0.44	g29613	30	518		(AL022

	613	098:1..965		S12001		098:326..965		55				140) glucosidase like protein [Arabidopsis thaliana]
157674	ATU019614	ATL8C28311:1180..540	gap2	ATCEA4C2695_1	90			g2252851	30	211	9.4e-21	(AF013294) No definition line found [Arabidopsis thaliana]
157675	ATU019615	ATL8C8829:369..957	gap2	ATCEA4C16653_1	90	ATL8C8829:369..778	1.00					
157676	ATU019616	ATL8C7099:1032..14	gap2	ATCEA4S3170	90	ATL8C7099:885..14	0.99					
157677	ATU019617	ATL8C7468:806..1	gap2	ATCEA4C29681_1	90	ATL8C7468:806..26	0.99					
157678	ATU019618	ATL8C5768:1031..32	gap2	ATCEA4S4117	90	ATL8C5768:1020..32	0.99					
157679	ATU019619	ATL8C7617:437..7	gap2	ATCEA4S8293	90	ATL8C7617:389..20	0.99					
157680	ATU019620	ATL8C47539:1..742	gap2	ATCEA4C8355_1	90	ATL8C47539:6..742	0.98					
157681	ATU019621	ATL8C31631:1170..91	gap2	ATCEA4S30346	90	ATL8C31631:1170..91	0.98					
157682	ATU019	ATL8C2	gap2	ATCEA4	90	ATL8C2	0.98					

CLASSIFY SECURED

	622	2702:840..67		S447		2702:716..67						
157683	ATU0196 23	ATL8C37203:2049..578	gap2	ATCEA4S13062	90	ATL8C37203:2046..578	0.97					
157684	ATU0196 24	ATL8C35541:1..311	gap2	ATCEA4C25628_1	90	ATL8C35541:26..311	0.97					
157685	ATU0196 25	ATL8S17985:1..343	gap2	ATCEA4C127210_1	90	ATL8S17985:258..58	0.97					
157686	ATU0196 26	ATL8C4465:1..970	gap2	ATCEA4S32911, ATCEA4C49239_1	90, 84	ATL8C4465:48..764	0.97					

157687	ATU019627	ATL8C23090:684..1104	gap2	ATCEA4S11361	90	ATL8C23090:749..1068	0.97					
157688	ATU019628	ATL8C12700:1936..447	gap2	ATCEA4S31207	90	ATL8C12700:1778..447	0.96					
157689	ATU019629	ATL8C50244:2470..974	gap2	ATCEA4C10014_1	90	ATL8C50244:2373..974	0.96					
157690	ATU019630	ATL8C19039:278..1034	gap2	ATCEA4C18962_1	90	ATL8C19039:516..643	0.96					
157691	ATU019631	ATL8C20448:467..1	gap2	ATCEA4C57622_1, ATCEA4S25376	90, 86	ATL8C20448:464..176	0.96					
157692	ATU019632	ATL8S325:524..7	gap2	ATCEA4C137259_1	90	ATL8S325:440..7	0.96					
157693	ATU019633	ATL8S23612:704..470	gap2	ATCEA4C8946_1	90	ATL8S23612:561..470	0.95					
157694	ATU019634	ATL8S29013:174..540	gap2	ATCEA4S34971	90	ATL8S29013:174..540	0.95					
157695	ATU019635	ATL8C47713:323..903	gap2	ATCEA4C563_1	90	ATL8C47713:572..725	0.95					
157696	ATU019636	ATL8C22833:3401..159	gap2	ATCEA4S4872	89	ATL8C22833:3273..457	0.95	g3402697	100	2295	1.4e-194	(AC004261) putative

												phosphatidylinositol-4-phosphate 5-kinase [Arabidopsis thaliana]
157697	ATU019637	ATL8C41733:1..275	gap2	ATCEA4S6561	90	ATL8C41733:18..275	0.95					
157698	ATU019638	ATL8C32244:5823..1041	gap2	ATCEA4S179, ATCEA4S11406, ATCEA4S3937	89, 89, 88	ATL8C32244:3572..1041, ATL8C32244:5823..4080	0.94, 0.91	g4263541, g4263549, g4773910	100, 86, 68	1246, 1842, 245	1.2e-101, 8.7e-188, 5.3e-50	(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AC006250) putative En/Spm transposon hypothetical protein 1 [Arabi

												dopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
157699	ATU019639	ATL8C26715:2508..18	gap2	ATCEA4C6680_1	90	ATL8C26715:2458..18	0.94					
157700	ATU019640	ATL8S5670:485..49	gap2	ATCEA4S30751, ATCEA4S35175	90, 86	ATL8S5670:483..417	0.94					
157701	ATU019641	ATL8C30234:724..1177	gap2	ATCEA4S34224	90	ATL8C30234:924..994	0.94					
157702	ATU019642	ATL8C34786:172..561	gap2	ATCEA4S216	90	ATL8C34786:276..420	0.94					
157703	ATU019643	ATL8C48872:1132..854	gap2	ATCEA4S12782	90	ATL8C48872:982..854	0.94					
157704	ATU019644	ATL8C24236:182..992	gap2	ATCEA4S28930	90	ATL8C24236:182..376	0.94					
157705	ATU019	ATL8C4	gap2	ATCEA4	90	ATL8C4	0.93					

	645	3093:234..1314		C122045_1		3093:234..1314						
157706	ATU019646	ATL8C22451:296..1014	gap2	ATCEA4S34553	90	ATL8C22451:296..1014	0.93					
157707	ATU019647	ATL8C27217:83..810	gap2	ATCEA4S10311	90	ATL8C27217:83..810	0.93					
157708	ATU019648	ATL8S10839:57..442	gap2	ATCEA4C30082_1	90	ATL8S10839:106..442	0.93					
157709	ATU019649	ATL8C2133:593..158	gap2	ATCEA4S6028	90	ATL8C2133:497..329	0.93					
157710	ATU019650	ATL8C16401:295..1933	gap2	ATCEA4S3166	90	ATL8C16401:295..1540	0.93					
157711	ATU019651	ATL8C34957:182..515	gap2	ATCEA4S1519	90	ATL8C34957:352..420	0.92					
157712	ATU019652	ATL8C5152:849..176	gap2	ATCEA4C28181_1	90	ATL8C5152:849..176	0.92					
157713	ATU019653	ATL8C6495:1929..926	gap2	ATCEA4S31990	90	ATL8C6495:1929..942	0.92					
157714	ATU019654	ATL8C29431:667..1	gap2	ATCEA4C5591_1, ATCEA4C5591_2	90, 88	ATL8C29431:596..21	0.92					
157715	ATU019655	ATL8C5462:54	gap2	ATCEA4S26741	90	ATL8C5462:53	0.92					

		5..338				4..338						
157716	ATU019656	ATL8C35642:303..2162	gap2	ATCEA4S3275	89	ATL8C35642:359..2162	0.92	g4836894	100	1290	1.1e-127	(AC007369) Putative cdc2 kinase [Arabidopsis thaliana]
157717	ATU019657	ATL8C32815:32..589	gap2	ATCEA4C51310_1	90	ATL8C32815:37..134	0.91					
157718	ATU019658	ATL8C36915:1360..2838	gap2	ATCEA4S8030	90	ATL8C36915:1360..2838	0.91					
157719	ATU019659	ATL8C29978:113..2971	gap2	ATCEA4S25164	90	ATL8C29978:113..2971	0.91					
157720	ATU019660	ATL8C47792:1..944	gap2	ATCEA4C32047_1, ATCEA4S32231	90, 84	ATL8C47792:144..944	0.90					
157721	ATU019661	ATL8C49628:303..1	gap2	ATCEA4S1669	90	ATL8C49628:303..49	0.90					
157722	ATU019662	ATL8C27122:1370..125	gap2	ATCEA4C24334_2	90	ATL8C27122:1145..125	0.89					
157723	ATU019663	ATL8C14446:62..768	gap2	ATCEA4S178, ATCEA4S253	90, 84	ATL8C14446:153..768	0.89					
157724	ATU019664	ATL8C3473:84	gap2	ATCEA4C23953	90	ATL8C3473:84	0.89					

		3..1		_1		3..22						
157725	ATU019665	ATL8C13440:2406..3160	gap2	ATCEA4S35754, ATCEA4S32501	90, 88	ATL8C13440:3160..2406	0.89					
157726	ATU019666	ATL8C9318:1413..1	gap2	ATCEA4C105866_1, ATCEA4S2665	90, 82	ATL8C9318:1383..208	0.88					
157727	ATU019667	ATL8C34739:717..315	gap2	ATCEA4S597	90	ATL8C34739:585..424	0.87					
157728	ATU019668	ATL8C4597:423..87	gap2	ATCEA4S12642	90	ATL8C4597:422..117	0.87					
157729	ATU019669	ATL8C3141:2059..773	gap2	ATCEA4C19372_1	90	ATL8C3141:1904..773	0.87					
157730	ATU019670	ATL8C49358:2062..145	gap2	ATCEA4C74136_1	90	ATL8C49358:1831..145	0.86					
157731	ATU019671	ATL8S11504:16..375	gap2	ATCEA4C46610_1	90	ATL8S11504:340..240	0.86					
157732	ATU019672	ATL8C14839:278..2217	gap2	ATCEA4S22917	90	ATL8C14839:278..1796	0.86					
157733	ATU019673	ATL8C49780:1488..59	gap2	ATCEA4S31136	90	ATL8C49780:1422..59	0.86					
157734	ATU019674	ATL8C22292:1	gap2	ATCEA4S34577	90	ATL8C22292:1	0.86					

		189..443				189..599						
157735	ATU019675	ATL8S2261:28..473	gap2	ATCEA4S26041	90	ATL8S2261:169..473	0.86					
157736	ATU019676	ATL8C16388:2424..214	gap2	ATCEA4S81	89	ATL8C16388:2424..214	0.86	g4567296	100	2095	2.8e-200	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
157737	ATU019677	ATL8C45741:1..684	gap2	ATCEA4C7225_1	90	ATL8C45741:205..546	0.86					
157738	ATU019678	ATL8C15534:3035..353	gap2	ATCEA4S4970	90	ATL8C15534:2932..353	0.86					
157739	ATU019679	ATL8C36367:1279..85	gap2	ATCEA4S6476	90	ATL8C36367:1231..85	0.85					
157740	ATU019680	ATL8C8152:320..1561	gap2	ATCEA4S27407	90	ATL8C8152:320..1561	0.85					
157741	ATU019681	ATL8C36359:475..854	gap2	ATCEA4C13996_1	90	ATL8C36359:549..854	0.85					
157742	ATU019	ATL8C4	gap2	ATCEA4	90	ATL8C4	0.84					

	682	7984:585..1		C5741_1		7984:495..37						
157743	ATU019683	ATL8C12623:964..1	gap2	ATCEA4C61541_1	90	ATL8C12623:964..172	0.84					
157744	ATU019684	ATL8S23917:129..479	gap2	ATCEA4C32116_1	90	ATL8S23917:364..454	0.84					
157745	ATU019685	ATL8C42426:252..1857	gap2	ATCEA4C117114_1, ATCEA4S33232	90, 88	ATL8C42426:544..1662	0.84					
157746	ATU019686	ATL8C44965:17..2477	gap2	ATCEA4C18258_2	90	ATL8C44965:17..2477	0.84					
157747	ATU019687	ATL8C44387:783..178	gap2	ATCEA4S7633	90	ATL8C44387:776..178	0.83					
157748	ATU019688	ATL8C19344:1365..653	gap2	ATCEA4C12398_1	90	ATL8C19344:1278..653	0.83					
157749	ATU019689	ATL8C8488:34..1026	gap2	ATCEA4C4824_1	90	ATL8C8488:34..1026	0.83					
157750	ATU019690	ATL8C1250:3536..16190	gap2	ATCEA4S178	89	ATL8C1250:7321..11051, ATL8C1250:11851..14792	0.83, 0.74	g4432795, g4432794, g4262159	100, 90, 77	551, 3912, 1106	9.8e-30, 0.0, 9.4e-98	(AC006437) putative protein 2 of of the En/Spm transposable

												element system of Zea mays [Arabidopsis thaliana]; (AC006437) putative Tnp2 Tam1 transposon protein [Arabidopsis thaliana]; (AC005275) hypothetical protein [Arabidopsis thaliana]
157751	ATU019691	ATL8C25513:980..582	gap2	ATCEA4S6906	90	ATL8C25513:921..582	0.83					
157752	ATU019692	ATL8C19223:1673..1	gap2	ATCEA4C118038_1,	90, 87	ATL8C19223:1501..1	0.83					

		39		ATCEA4C7329_1		39						
157753	ATU019693	ATL8S24039:188..618	gap2	ATCEA4C7719_1	90	ATL8S24039:188..604	0.83					
157754	ATU019694	ATL8C6525:1166..50	gap2	ATCEA4S33697	90	ATL8C6525:1166..50	0.82					
157755	ATU019695	ATL8C23592:698..1074	gap2	ATCEA4C9188_1	90	ATL8C23592:698..951	0.82					
157756	ATU019696	ATL8C32592:1780..169	gap2	ATCEA4S11941	90	ATL8C32592:1780..169	0.81					
157757	ATU019697	ATL8C30587:1..349	gap2	ATCEA4S32684	90	ATL8C30587:276..344	0.81					
157758	ATU019698	ATL8C11604:1..393	gap2	ATCEA4C22508_1	90	ATL8C11604:23..393	0.81					
157759	ATU019699	ATL8C15448:1345..1	gap2	ATCEA4S34891, ATCEA4C51154_1	90, 86	ATL8C15448:1345..41	0.81					
157760	ATU019700	ATL8C14644:535..1	gap2	ATCEA4S1804	90	ATL8C14644:535..15	0.81					
157761	ATU019701	ATL8S10779:192..614	gap2	ATCEA4C37870_1	90	ATL8S10779:192..567	0.80					
157762	ATU019702	ATL8C17455:1	gap2	ATCEA4S35836	90	ATL8C17455:1	0.80					

		..1073				09..10 73						
157763	ATU019 703	ATL8C1 0687:4 93..22 93	gap2	ATCEA4 C51850 _1	89	ATL8C1 0687:4 93..22 93	0.80	g33416 99	100	1456		(AC003 672) putati ve gibere llin beta- hydrox ylase [Arabi dopsis thalia na]
157764	ATU019 704	ATL8C4 8840:1 27..11 19	gap2	ATCEA4 C12607 8_1	90	ATL8C4 8840:1 27..10 41	0.80					
157765	ATU019 705	ATL8C2 3524:1 650..1 32	gap2	ATCEA4 S14010	90	ATL8C2 3524:1 650..1 42	0.80					
157766	ATU019 706	ATL8C7 458:46 4..1	gap2	ATCEA4 S32659 , ATCEA4 S35244 , ATCEA4 S33315	90, 86, 86	ATL8C7 458:46 4..155	0.80					
157767	ATU019 707	ATL8C3 3889:8 23..40	gap2	ATCEA4 S12211	90	ATL8C3 3889:8 02..40	0.80					
157768	ATU019 708	ATL8C2 1326:1 839..1 225	gap2	ATCEA4 S13901	90	ATL8C2 1326:1 839..1 225	0.80					
157769	ATU019 709	ATL8C9 554:98	gap2	ATCEA4 C7741_	90	ATL8C9 554:99	0.79					

		6..1634		1		8..1634						
157770	ATU019710	ATL8C16830:98..3014	gap2	ATCEA4S3542	90	ATL8C16830:98..2936	0.79					
157771	ATU019711	ATL8C28057:761..1166	gap2	ATCEA4C8651_1, ATCEA4S6070	90, 87	ATL8C28057:1048..908	0.78					
157772	ATU019712	ATL8C42009:222..2158	gap2	ATCEA4C703_2, ATCEA4C703_1	89, 88	ATL8C42009:222..2114	0.77	g4049401	100	997	6.0e-83	(AJ131580) glutathione transferase AtGST 10 [Arabidopsis thaliana]
157773	ATU019713	ATL8C9568:86..1211	gap2	ATCEA4S35096	90	ATL8C9568:229..1211	0.76					
157774	ATU019714	ATL8C39171:6607..200	gap2	ATCEA4S11082, ATCEA4S3937	89, 85	ATL8C39171:3975..200, ATL8C39171:4526..4191	0.75, 0.99	g3695396, g4773910, g3319361	100, 48, 35	1910, 178, 131	9.3e-189, 2.0e-17, 3.9e-05	(AF096372) contains similarity to Arabidopsis thaliana retrotranspo

												son Athila (GB:X81801) [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]; (AF077408) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]

157775	ATU0197 15	ATL8C20453:133..895	gap2	ATCEA4C26317_1	90	ATL8C20453:133..809	0.75					
157776	ATU0197 16	ATL8C34749:357..832	gap2	ATCEA4S3641	90	ATL8C34749:357..511	0.75					
157777	ATU0197 17	ATL8C42121:1173..25	gap2	ATCEA4C20501_1	90	ATL8C42121:1111..25	0.74					
157778	ATU0197 18	ATL8C18302:448..16	gap2	ATCEA4C69018_1	90	ATL8C18302:394..16	0.74					
157779	ATU0197 19	ATL8C18336:260..785	gap2	ATCEA4C23874_2	90	ATL8C18336:260..785	0.74					
157780	ATU0197 20	ATL8C11716:195..1481	gap2	ATCEA4S35762	90	ATL8C11716:195..1481	0.74					
157781	ATU0197 21	ATL8C34648:805..1	gap2	ATCEA4S10508	90	ATL8C34648:804..302	0.74					
157782	ATU0197 22	ATL8C45035:178..1168	gap2	ATCEA4S33849, ATCEA4S31876	90, 88	ATL8C45035:178..950	0.73					
157783	ATU0197 23	ATL8C35086:618..2714	gap2	ATCEA4S29462	90	ATL8C35086:618..2714	0.73					
157784	ATU0197 24	ATL8C42068:624..1	gap2	ATCEA4C58253_1	90	ATL8C42068:473..330	0.73					

157785	ATU019725	ATL8S25644:465..1	gap2	ATCEA4S36141, ATCEA4C180821	90, 83	ATL8S25644:392..19	0.72					
157786	ATU019726	ATL8C27947:339..2762	gap2	ATCEA4S7786	89	ATL8C27947:339..2762	0.72	g4559397	100	2631		(AC006526) putative cyclic nucleotide-regulated ion channel protein [Arabidopsis thaliana]
157787	ATU019727	ATL8C8784:155..945	gap2	ATCEA4S34841	90	ATL8C8784:155..945	0.72					
157788	ATU019728	ATL8C42647:766..90	gap2	ATCEA4S32385	90	ATL8C42647:724..185	0.71					
157789	ATU019729	ATL8C41839:2177..1439	gap2	ATCEA4C119361_1	90	ATL8C41839:2163..1439	0.71					
157790	ATU019730	ATL8C47565:1548..545	gap2	ATCEA4C1726_1, ATCEA4C1726_	90, 89	ATL8C47565:1306..567	0.71					

				2								
157791	ATU019731	ATL8C25030:1436..119	gap2	ATCEA4C2322_1	90	ATL8C25030:1436..176	0.70					
157792	ATU019732	ATL8S14572:66..519	gap2	ATCEA4C6555_1	90	ATL8S14572:189..454	0.70					
157793	ATU019733	ATL8C14851:128..511	gap2	ATCEA4S2312	90	ATL8C14851:128..511	0.70					
157794	ATU019734	ATL8S11149:436..89	gap2	ATCEA4S8142	90	ATL8S11149:436..245	0.69					
157795	ATU019735	ATL8C9545:953..559	gap2	ATCEA4C73999_1, ATCEA4S14013	90, 84	ATL8C9545:836..625	0.69					
157796	ATU019736	ATL8C2630:2289..124	gap2	ATCEA4S5223, ATCEA4C763_1, ATCEA4S1957	90, 89, 89	ATL8C2630:2289..716	0.69					
157797	ATU019737	ATL8C9639:673..849	gap2	ATCEA4S36337	90	ATL8C9639:673..792	0.69					
157798	ATU019738	ATL8S29362:488..262	gap2	ATCEA4S11455	90	ATL8S29362:454..266	0.69					
157799	ATU019739	ATL8C42020:1819..862	gap2	ATCEA4C80558_1, ATCEA4	90, 89	ATL8C42020:1819..1194	0.69					

				S32259								
157800	ATU019740	ATL8C11854:439..1542	gap2	ATCEA4C27195_1	90	ATL8C11854:556..1481	0.69					
157801	ATU019741	ATL8C25344:2410..91	gap2	ATCEA4S32529	89	ATL8C25344:2410..134	0.68	g3063696	100	950	7.4e-98	(AL022537) putative protein [Arabidopsis thaliana]
157802	ATU019742	ATL8C48694:878..1985	gap2	ATCEA4C30762_1	90	ATL8C48694:878..1985	0.68					
157803	ATU019743	ATL8C11685:1069..245	gap2	ATCEA4S30178	90	ATL8C11685:916..245	0.68					
157804	ATU019744	ATL8C4000:230..1122	gap2	ATCEA4C74037_1	90	ATL8C4000:230..1122	0.68					
157805	ATU019745	ATL8C13930:6893..9661	gap2	ATCEA4S3361	89	ATL8C13930:7549..9661	0.68	g4490706	100	2099	2.5e-153	(AL035680) putative protein [Arabidopsis thaliana]
157806	ATU019746	ATL8C17657:55..982	gap2	ATCEA4C6981_1,	90, 87	ATL8C17657:888..97	0.68					

				ATCEA4S746		7						
157807	ATU019747	ATL8C37494:2748..1233	gap2	ATCEA4C126613_1, ATCEA4S33973	90, 89	ATL8C37494:2748..1423	0.68					
157808	ATU019748	ATL8C30011:426..529	gap2	ATCEA4C1941_1	90	ATL8C30011:426..505	0.67					
157809	ATU019749	ATL8C31931:263..667	gap2	ATCEA4S12209	90	ATL8C31931:263..357	0.67					
157810	ATU019750	ATL8C12319:1..1751	gap2	ATCEA4C26784_1	90	ATL8C12319:167..1751	0.67					
157811	ATU019751	ATL8C10046:72..557	gap2	ATCEA4S921	90	ATL8C10046:72..482	0.66					
157812	ATU019752	ATL8C42382:349..2167	gap2	ATCEA4C30687_1	90	ATL8C42382:349..2130	0.66					
157813	ATU019753	ATL8C35466:2307..90	gap2	ATCEA4S178, ATCEA4S253	89, 88	ATL8C35466:2189..90	0.65	g4038066	100	556	3.6e-34	(AC005897) hypothetical protein [Arabidopsis thaliana]
157814	ATU019754	ATL8C39191:670..323	gap2	ATCEA4S34708	90	ATL8C39191:670..418	0.65					

157815	ATU019755	ATL8C50097:158..602	gap2	ATCEA4S12258	90	ATL8C50097:158..478	0.65					
157816	ATU019756	ATL8C28909:1070..213	gap2	ATCEA4C8903_1	90	ATL8C28909:927..213	0.64					
157817	ATU019757	ATL8C3207:1..8204	gap2	ATCEA4S178, ATCEA4S253	89, 89	ATL8C3207:123..7320	0.64	g4038066, g3319360, g2129618	100, 59, 47	325, 1579, 1524	3.4e-26, 5.5e-152, 1.8e-112	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AF077408) contains similarity to Vicia faba retrotransposon-like gene (GB:AB007467) [Arabidopsis thaliana]; hypoth

												etical protein 1 - Arabidopsis thaliana retrotransposon Athila [Arabidopsis thaliana]
157818	ATU019758	ATL8C43436:27..871	gap2	ATCEA4S34047, ATCEA4S33403	90, 89	ATL8C43436:27..687	0.63					
157819	ATU019759	ATL8C36838:271..19	gap2	ATCEA4S32203	90	ATL8C36838:271..19	0.63					
157820	ATU019760	ATL8C9617:88..653	gap2	ATCEA4C6255_1	90	ATL8C9617:207..636	0.63					
157821	ATU019761	ATL8C13672:187..4943	gap2	ATCEA4C39289_1	90	ATL8C13672:187..4943	0.62					
157822	ATU019762	ATL8C6441:167..826	gap2	ATCEA4C92346_1	90	ATL8C6441:167..380	0.61					
157823	ATU019763	ATL8C15572:702..1	gap2	ATCEA4S33341	90	ATL8C15572:702..330	0.61					
157824	ATU019764	ATL8C16012:1..295	gap2	ATCEA4C120378_1	90	ATL8C16012:19..286	0.61					

157825	ATU0197 65	ATL8S3440:1..628	gap2	ATCEA4S34713, ATCEA4C64027_1	90, 86	ATL8S3440:23..438	0.61					
157826	ATU0197 66	ATL8C43089:697..1	gap2	ATCEA4C91510_1	90	ATL8C43089:697..16	0.61					
157827	ATU0197 67	ATL8C47916:342..120	gap2	ATCEA4S4027	90	ATL8C47916:236..122	0.61					
157828	ATU0197 68	ATL8C14163:1..1102	gap2	ATCEA4C6643_1, ATCEA4S4311	90, 88	ATL8C14163:58..1102	0.60					
157829	ATU0197 69	ATL8C12267:145..1545	gap2	ATCEA4S13288, ATCEA4C143511_1, ATCEA4C54782_1	90, 83, 82	ATL8C12267:234..1545	0.60					
157830	ATU0197 70	ATL8C20278:1337..493	gap2	ATCEA4C46080_1	90	ATL8C20278:1288..571	0.59					
157831	ATU0197 71	ATL8C40105:1..515	gap2	ATCEA4S30878	90	ATL8C40105:153..395	0.59					
157832	ATU0197 72	ATL8C11080:73..649	gap2	ATCEA4C19725_1	90	ATL8C11080:73..408	0.59					
157833	ATU0197 73	ATL8C6799:59	gap2	ATCEA4S34842	90	ATL8C6799:70	0.58					

		0..107 1				3..106 8						
157834	ATU019 774	ATL8C2 2437:1 84..11 83	gap2	ATCEA4 C15226 _1	90	ATL8C2 2437:1 84..11 83	0.58					
157835	ATU019 775	ATL8C3 0609:8 66..1	gap2	ATCEA4 S6336	90	ATL8C3 0609:8 66..42	0.56					
157836	ATU019 776	ATL8C3 4915:7 081..1	gap2	ATCEA4 S321	89	ATL8C3 4915:7 081..1 11	0.56	g44328 02, g47739 08	100, 100	3461, 2612	0.0, 2.7e-269	(AC006 437) putati ve pol polypr otein, 5' partia l [Arabi dopsis thalia na]; (AF147 259) No defini tion line found [Arabi dopsis thalia na]
157837	ATU019 777	ATL8C3 3090:2 358..4 43	gap2	ATCEA4 S81	89	ATL8C3 3090:2 307..7 72	0.56	g45672 96	100	2422	2.4e-235	(AC006 918) putati ve Athila retroe lement

												ORF1 protein [Arabidopsis thaliana]
157838	ATU019778	ATL8C26004:304..82	gap2	ATCEA4C8662_1	90	ATL8C26004:275..82	0.55					
157839	ATU019779	ATL8C42067:18..656	gap2	ATCEA4S6668, ATCEA4C55467_1	90, 83	ATL8C42067:93..656	0.55					
157840	ATU019780	ATL8C46751:1..425	gap2	ATCEA4S17160	90	ATL8C46751:375..425	0.55					
157841	ATU019781	ATL8C1393:130..13562	gap2	ATCEA4S13901, ATCEA4S178, ATCEA4S33179	89, 86, 83	ATL8C1393:130..13562	0.55	g4038066, g3779029, g4432807, g4914318, g3695382	100, 65, 57, 44, 41	665, 304, 3964, 1442, 324	9.6e-25, 2.4e-23, 0.0, 2.6e-134, 1.7e-16	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AC005171) putative zinc finger protein [Arabidopsis thalia

												na]; (AC006570) putative polyprotein [Arabidopsis thaliana]; (AC005489) F14N23.4 [Arabidopsis thaliana]; (AF096370) contains similarity to Arabidopsis thaliana retrotransposon Ta11-1 (GB:L47193) [Arabidopsis thaliana]

157842	ATU019782	ATL8C10965:252..6389	gap2	ATCEA4S5256, ATCEA4C5364_1	89, 85	ATL8C10965:831..6389	0.55	g4467156, g3445211, g3738335	100, 99, 59	843, 273, 513	2.4e-85, 1.7e-12, 2.5e-27	(AL035540) putative protein [Arabidopsis thaliana]; (AC004786) hypothetical protein [Arabidopsis thaliana]; (AC005170) unknown protein [Arabidopsis thaliana]
157843	ATU019783	ATL8C45100:1613..471	gap2	ATCEA4S458	90	ATL8C45100:1454..471	0.54					
157844	ATU019784	ATL8C14027:2591..3588	gap2	ATCEA4S27933	90	ATL8C14027:3588..2591	0.53					
157845	ATU019785	ATL8C30326:1	gap2	ATCEA4C32746	90	ATL8C30326:2	0.53					

		..1030		_1		1..1030						
157846	ATU019786	ATL8C29910:78..492	gap2	ATCEA4C34250_1	90	ATL8C29910:78..462	0.52					
157847	ATU019787	ATL8C41788:396..8141	gap2	ATCEA4S178, ATCEA4S344, ATCEA4S253	89, 87, 86	ATL8C41788:3788..6355, ATL8C41788:396..3326	0.52, 0.82	g4586066, g4773908, g4038066, g4773910	100, 100, 100, 65	2224, 3265, 578, 281	9.6e-242, 0.0, 2.4e-46, 3.5e-17	(AC006194) putative polpolyprotein, 3' partial [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabidopsis thaliana]; (AF147

												259) No definition line found [Arabidopsis thaliana]
157848	ATU019788	ATL8C12334:2215..30	gap2	ATCEA4C15706_1	90	ATL8C12334:2215..30	0.52					
157849	ATU019789	ATL8C45478:4387..1	gap2	ATCEA4S33179	89	ATL8C45478:4387..145	0.51	g4263062, g4432807	100, 34	359, 2638	2.4e-35, 7.7e-239	(AC005142) hypothetical protein [Arabidopsis thaliana]; (AC006570) putative polyprotein [Arabidopsis thaliana]
157850	ATU019790	ATL8C5112:600..4	gap2	ATCEA4S7042	90	ATL8C5112:287..185	0.51					
157851	ATU019791	ATL8C9108:2655..20	gap2	ATCEA4S34657	90	ATL8C9108:2509..23	0.50					

		80				11						
157852	ATU019792	ATL8C8749:435..1143	gap2	ATCEA4S178, ATCEA4S253	90, 88	ATL8C8749:526..1143	0.50					
157853	ATU019793	ATL8C24053:1404..816	gap2	ATCEA4S14077, ATCEA4S12921	90, 84	ATL8C24053:1404..828	0.50					
157854	ATU019794	ATL8S11706:90..352	gap2	ATCEA4C1708_1	90	ATL8S11706:144..333	0.47					
157855	ATU019795	ATL8C21107:379..30	gap2	ATCEA4S29899	90	ATL8C21107:370..97	0.46					
157856	ATU019796	ATL8C11:400..155	gap2	ATCEA4S11665	90	ATL8C11:400..155	0.46					
157857	ATU019797	ATL8C41856:571..279	gap2	ATCEA4C25822_1	90	ATL8C41856:571..279	0.46					
157858	ATU019798	ATL8C32979:1199..558	gap2	ATCEA4S32368	90	ATL8C32979:1165..558	0.45					
157859	ATU019799	ATL8C32526:1..545	gap2	ATCEA4C163021_1	90	ATL8C32526:68..545	0.45					
157860	ATU019800	ATL8C5790:114..301	gap2	ATCEA4S8185	90	ATL8C5790:301..114	0.44					
157861	ATU019801	ATL8C35959:685..78	gap2	ATCEA4S12726	90	ATL8C35959:350..86	0.44					
157862	ATU019802	ATL8C38206:209..17	gap2	ATCEA4S22725	90	ATL8C38206:209..17	0.44					

		24				24						
157863	ATU0198 03	ATL8C2550:198..1686	gap2	ATCEA4S34108	90	ATL8C2550:198..1584	0.43					
157864	ATU0198 04	ATL8C2664:3643..202	gap2	ATCEA4C144724_1	90	ATL8C2664:3643..202	0.43					
157865	ATU0198 05	ATL8C41011:807..230	gap2	ATCEA4S18847	90	ATL8C41011:427..230	0.43					
157866	ATU0198 06	ATL8C20229:148..1233	gap2	ATCEA4C34077_1	90	ATL8C20229:695..990	0.42					
157867	ATU0198 07	ATL8S23467:69..643	gap2	ATCEA4S35459	90	ATL8S23467:69..637	0.42					
157868	ATU0198 08	ATL8S21713:338..150	gap2	ATCEA4S32939	90	ATL8S21713:338..236	0.41					
157869	ATU0198 09	ATL8C1749:382..1	gap2	ATCEA4S32667	90	ATL8C1749:249..201	0.41					
157870	ATU0198 10	ATL8C46253:588..534	gap2	ATCEA4C18311_1	90							
157871	ATU0198 11	ATL8C5751:388..1	gap2	ATCEA4C30459_1	90							
157872	ATU0198 12	ATL8C18315:1483..1791	gap2	ATCEA4S13680	90							
157873	ATU0198 13	ATL8C19954:1	gap2	ATCEA4S29564	89			g3128200	100	1256	3.0e-94	(AC004521)

		222..475										unknown protein [Arabidopsis thaliana]
157874	ATU019814	ATL8C42131:839..1089	gap2	ATCEA4S31075	90							
157875	ATU019815	ATL8S3167:1..130	gap2	ATCEA4C38125_1	90							
157876	ATU019816	ATL8C9335:1831..1410	gap2	ATCEA4S13133, ATCEA4C23002_1	90, 82							
157877	ATU019817	ATL8C15473:3486..3068	gap2	ATCEA4S25245	90							
157878	ATU019818	ATL8C10393:140..512	gap2	ATCEA4S344	90							
157879	ATU019819	ATL8C32347:1216..1681	gap2	ATCEA4C117675_1, ATCEA4S18396	90, 88							
157880	ATU019820	ATL8C10375:862..542	gap2	ATCEA4S2696	90							
157881	ATU019821	ATL8C18143:6	gap2	ATCEA4C90184	90							

		38..311		_1								
157882	ATU019822	ATL8C38352:1458..1056	gap2	ATCEA4S3036	90							
157883	ATU019823	ATL8C18056:496..5	gap2	ATCEA4C58306_1	90							
157884	ATU019824	ATL8C38327:1065..99	gap2	ATCEA4C19321_1	90							
157885	ATU019825	ATL8C3230:7764..4917	gap2	ATCEA4S27399	89			g4773908	100	3769	0.0	(AF147259) No definition line found [Arabidopsis thaliana]
157886	ATU019826	ATL8C3801:255..407	gap2	ATCEA4S807	90							
157887	ATU019827	ATL8C38007:1051..1212	gap2	ATCEA4C59650_1	90							
157888	ATU019828	ATL8S719:397..516	gap2	ATCEA4C647_1	90							
157889	ATU019829	ATL8C9235:851..1107	gap2	ATCEA4C57113_1	90							
157890	ATU019830	ATL8C18000:1	gap2	ATCEA4S11908	90							

		90..1										
157891	ATU019831	ATL8C34690:1..261	gap2	ATCEA4C108181_1	90							
157892	ATU019832	ATL8C37899:23..483	gap2	ATCEA4S34734	90							
157893	ATU019833	ATL8C11853:1204..1	gap2	ATCEA4C103061_1	90							
157894	ATU019834	ATL8C17847:426..90	gap2	ATCEA4S33681	90							
157895	ATU019835	ATL8S7356:1..337	gap2	ATCEA4C19351_2, ATCEA4C19351_1	90, 89							
157896	ATU019836	ATL8C28003:1..129	gap2	ATCEA4S4723	90							
157897	ATU019837	ATL8C15287:1830..1666	gap2	ATCEA4S20162	90							
157898	ATU019838	ATL8C17654:555..1702	gap2	ATCEA4S802	90							
157899	ATU019839	ATL8C16658:6802..6935	gap2	ATCEA4S33854	90							
157900	ATU019840	ATL8C25629:658..1	gap2	ATCEA4S31216, ATCEA4S1795	90, 82							
157901	ATU019	ATL8C2	gap2	ATCEA4	90							

	841	5075:1069..1		C30405_1								
157902	ATU019842	ATL8C37658:917..1198	gap2	ATCEA4S17162	90							
157903	ATU019843	ATL8C28075:293..1	gap2	ATCEA4S3534	90							
157904	ATU019844	ATL8C30032:3396..3618	gap2	ATCEA4S4986	90							
157905	ATU019845	ATL8C20758:996..1206	gap2	ATCEA4C26232_1, ATCEA4C26232_2	90, 89							
157906	ATU019846	ATL8S10073:413..558	gap2	ATCEA4C8046_1	90							
157907	ATU019847	ATL8S17239:1..244	gap2	ATCEA4C18946_1	90							
157908	ATU019848	ATL8C31966:125..1	gap2	ATCEA4C6182_1	90							
157909	ATU019849	ATL8C2720:613..2776	gap2	ATCEA4S370	89			g4417305	100	1573	2.6e-81	(AC006446) hypothetical protein [Arabidopsis thaliana]
157910	ATU019	ATL8C1	gap2	ATCEA4	90							

	850	7228:1264..753		S32568								
157911	ATU019851	ATL8C41773:3706..9598	gap2	ATCEA4S27399	89			g3695399	100	3931	0.0	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
157912	ATU019852	ATL8C16783:1..428	gap2	ATCEA4S29526, ATCEA4S33011	90, 86							
157913	ATU019853	ATL8C28319:1..276	gap2	ATCEA4S34829	90							
157914	ATU019854	ATL8C28361:404..639	gap2	ATCEA4S31814	90							
157915	ATU019855	ATL8C30695:1..489	gap2	ATCEA4C120239_1, ATCEA4	90, 89, 87, 86							

				C4716_1, ATCEA4C23096_1, ATCEA4C23096_2								
157916	ATU019856	ATL8C10054:1397..1562	gap2	ATCEA4S1571	90							
157917	ATU019857	ATL8C28389:839..637	gap2	ATCEA4S30608	90							
157918	ATU019858	ATL8C32668:1..187	gap2	ATCEA4C53301_1	90							
157919	ATU019859	ATL8C3013:1436..1039	gap2	ATCEA4S18499	90							
157920	ATU019860	ATL8C37223:991..1467	gap2	ATCEA4C103741_1	90							
157921	ATU019861	ATL8C41653:611..241	gap2	ATCEA4S32663	90							
157922	ATU019862	ATL8C12199:1334..1542	gap2	ATCEA4S31294	90							
157923	ATU019863	ATL8C8869:764..1386	gap2	ATCEA4S17870, ATCEA4S10512	90, 84							

157924	ATU0198 64	ATL8C37102:586..92	gap2	ATCEA4S3104	90							
157925	ATU0198 65	ATL8C37048:1352..772	gap2	ATCEA4C84564_2	90							
157926	ATU0198 66	ATL8C37042:2230..1305	gap2	ATCEA4C11181_1	90							
157927	ATU0198 67	ATL8S10275:206..90	gap2	ATCEA4C7484_1	90							
157928	ATU0198 68	ATL8C16943:123..517	gap2	ATCEA4S23970	90							
157929	ATU0198 69	ATL8S20083:130..40	gap2	ATCEA4C6808_1	90							
157930	ATU0198 70	ATL8C36948:1698..1536	gap2	ATCEA4S31399	90							
157931	ATU0198 71	ATL8C510:529..768	gap2	ATCEA4C63542_1	90							
157932	ATU0198 72	ATL8S1967:601..1	gap2	ATCEA4C921_1	90							
157933	ATU0198 73	ATL8S20092:265..1	gap2	ATCEA4C27066_1, ATCEA4S1818	90, 83							
157934	ATU0198 74	ATL8C33432:425..602	gap2	ATCEA4C40222_1	90							

157935	ATU019875	ATL8C16792:1048..1261	gap2	ATCEA4S13006	90							
157936	ATU019876	ATL8C28654:289..1	gap2	ATCEA4S7741	90							
157937	ATU019877	ATL8C6188:5276..4754	gap2	ATCEA4C6288_1	90							
157938	ATU019878	ATL8C36857:1193..1109	gap2	ATCEA4S8399	90							
157939	ATU019879	ATL8C16672:744..923	gap2	ATCEA4S26745	90							
157940	ATU019880	ATL8C3021:877..1081	gap2	ATCEA4S12562	90							
157941	ATU019881	ATL8C3681:9994..9639	gap2	ATCEA4S178	90							
157942	ATU019882	ATL8C28843:262..573	gap2	ATCEA4S34462	90							
157943	ATU019883	ATL8C17051:222..1409	gap2	ATCEA4S35130,ATCEA4S234	90, 85							
157944	ATU019884	ATL8C36809:223..1	gap2	ATCEA4S31403	90							
157945	ATU019	ATL8C3	gap2	ATCEA4	90							

	885	1909:186..47		C6284_1								
157946	ATU019886	ATL8C8625:276..380	gap2	ATCEA4C49109_1	90							
157947	ATU019887	ATL8C31679:4287..4001	gap2	ATCEA4C49109_1, ATCEA4C24144_1	90, 82							
157948	ATU019888	ATL8C36631:745..105	gap2	ATCEA4C7244_1	90							
157949	ATU019889	ATL8C47094:1330..1083	gap2	ATCEA4C31003_1	90							
157950	ATU019890	ATL8C36516:655..106	gap2	ATCEA4C35454_1	90							
157951	ATU019891	ATL8S23618:97..1	gap2	ATCEA4C708_1	90							
157952	ATU019892	ATL8C31442:229..311	gap2	ATCEA4S4637	90							
157953	ATU019893	ATL8C18752:213..1	gap2	ATCEA4C45144_1	90							
157954	ATU019894	ATL8S10963:630..748	gap2	ATCEA4C107449_1, ATCEA4S19327	90, 86							
157955	ATU019895	ATL8C23607:9	gap2	ATCEA4C81763	90							

		2..304		1								
157956	ATU019896	ATL8C24735:202..382	gap2	ATCEA4S27407	90							
157957	ATU019897	ATL8C35994:1..258	gap2	ATCEA4S31098	90							
157958	ATU019898	ATL8S11157:53..400	gap2	ATCEA4C7700_1, ATCEA4S5459	90, 84							
157959	ATU019899	ATL8C35850:1238..1091	gap2	ATCEA4S18768	90							
157960	ATU019900	ATL8C12922:349..1	gap2	ATCEA4S3179	90							
157961	ATU019901	ATL8C4938:1025..184	gap2	ATCEA4C254_1	90							
157962	ATU019902	ATL8S8225:118..276	gap2	ATCEA4S28935, ATCEA4S28194	90, 90							
157963	ATU019903	ATL8S9275:230..91	gap2	ATCEA4S2090, ATCEA4S14288	90, 82							
157964	ATU019904	ATL8C35182:1242..990	gap2	ATCEA4S4695	90							
157965	ATU019905	ATL8C35685:194..90	gap2	ATCEA4S27838	90							

		1										
157966	ATU019906	ATL8C1238:3482..3104	gap2	ATCEA4S11736	90							
157967	ATU019907	ATL8C11127:72..320	gap2	ATCEA4C17385_1, ATCEA4C17385_2	90, 89							
157968	ATU019908	ATL8C12897:572..1	gap2	ATCEA4S28968	90							
157969	ATU019909	ATL8S25329:1..133	gap2	ATCEA4C64903_1	90							
157970	ATU019910	ATL8C30544:93..267	gap2	ATCEA4S26868	90							
157971	ATU019911	ATL8C35468:749..1223	gap2	ATCEA4C50548_1	90							
157972	ATU019912	ATL8S21867:269..25	gap2	ATCEA4S31412	90							
157973	ATU019913	ATL8C33028:1..858	gap2	ATCEA4C46912_1, ATCEA4S6275	90, 86							
157974	ATU019914	ATL8C31719:642..135	gap2	ATCEA4C135698_1	90							
157975	ATU019915	ATL8S4810:114..173	gap2	ATCEA4S32686, ATCEA4	90, 87							

				S25924								
157976	ATU019916	ATL8C3996:1..487	gap2	ATCEA4C107125_1, ATCEA4C107125_2	90, 82							
157977	ATU019917	ATL8C35338:469..1187	gap2	ATCEA4S6584, ATCEA4S30804, ATCEA4S9187, ATCEA4S8021	90, 85, 84, 82							
157978	ATU019918	ATL8S11491:438..360	gap2	ATCEA4C19887_1	90							
157979	ATU019919	ATL8C35241:228..312	gap2	ATCEA4S34394	90							
157980	ATU019920	ATL8C30722:499..1	gap2	ATCEA4C74298_1	90							
157981	ATU019921	ATL8C40990:247..1	gap2	ATCEA4C58800_1	90							
157982	ATU019922	ATL8C6760:1..265	gap2	ATCEA4C72220_1	90							
157983	ATU019923	ATL8S9162:129..250	gap2	ATCEA4C19817_1	90							
157984	ATU019924	ATL8C40934:358..626	gap2	ATCEA4C196_1	90							

157985	ATU019925	ATL8C35065:1..547	gap2	ATCEA4C117543_1	90							
157986	ATU019926	ATL8C35055:381..876	gap2	ATCEA4S35877	90							
157987	ATU019927	ATL8C10849:1..832	gap2	ATCEA4C73529_1	89			g4263711	100	601	1.8e-62	(AC006223) putative CCR4-associated transcription factor [Arabidopsis thaliana]
157988	ATU019928	ATL8C18515:1..79	gap2	ATCEA4C18326_1	90							
157989	ATU019929	ATL8C30989:503..144	gap2	ATCEA4S35658	90							
157990	ATU019930	ATL8C8:1040..344	gap2	ATCEA4C57417_1	90							
157991	ATU019931	ATL8C32278:797..331	gap2	ATCEA4C27416_1	90							
157992	ATU019932	ATL8C30875:1941..1537	gap2	ATCEA4C20463_1	90							

157993	ATU0191933	ATL8C7319:443..1	gap2	ATCEA4C5884_1	90							
157994	ATU0191934	ATL8C12746:846..1103	gap2	ATCEA4S1688	90							
157995	ATU0191935	ATL8C12240:1831..2184	gap2	ATCEA4S126	90							
157996	ATU0191936	ATL8C3250:1..321	gap2	ATCEA4S178	90							
157997	ATU0191937	ATL8C31099:1293..1380	gap2	ATCEA4C43527_1, ATCEA4S10460	90, 84							
157998	ATU0191938	ATL8C34375:1..218	gap2	ATCEA4S22479	90							
157999	ATU0191939	ATL8C3421:215..607	gap2	ATCEA4C28148_3	90							
158000	ATU0191940	ATL8C34915:6320..7167	gap2	ATCEA4S27399, ATCEA4S344	90, 89							
158001	ATU0191941	ATL8C44457:256..762	gap2	ATCEA4C101681_1	90							
158002	ATU0191942	ATL8C32785:402..785	gap2	ATCEA4S7214	90							
158003	ATU0191943	ATL8C3411:79	gap2	ATCEA4S32174	90							

		4..927										
158004	ATU019944	ATL8C30915:490..17	gap2	ATCEA4S32780	90							
158005	ATU019945	ATL8C32247:283..716	gap2	ATCEA4C82751_1	90							
158006	ATU019946	ATL8C33971:597..775	gap2	ATCEA4C73456_1	90							
158007	ATU019947	ATL8C39683:2116..2789	gap2	ATCEA4S7	89			g4886286	100	736	4.8e-60	(AL050300) putative protein [Arabidopsis thaliana]
158008	ATU019948	ATL8S1921:147..527	gap2	ATCEA4C105826_1	90							
158009	ATU019949	ATL8C22281:524..706	gap2	ATCEA4S34814	90							
158010	ATU019950	ATL8C25009:1096..93	gap2	ATCEA4S34468	90							
158011	ATU019951	ATL8C50077:3480..4123	gap2	ATCEA4S321, ATCEA4S12828	90, 86							
158012	ATU019952	ATL8C21631:405..32	gap2	ATCEA4C95705_1	90							

		0										
158013	ATU019953	ATL8C22609:142..268	gap2	ATCEA4S7365	90							
158014	ATU019954	ATL8C33340:3291..2603	gap2	ATCEA4S12719, ATCEA4C2625_1	90, 83							
158015	ATU019955	ATL8C44224:290..1	gap2	ATCEA4C1696_1	90							
158016	ATU019956	ATL8C23128:55..183	gap2	ATCEA4S30123	90							
158017	ATU019957	ATL8C24655:47..362	gap2	ATCEA4S36149	90							
158018	ATU019958	ATL8C24627:4586..4156	gap2	ATCEA4S23374	90							
158019	ATU019959	ATL8C23454:2118..2459	gap2	ATCEA4S27375	90							
158020	ATU019960	ATL8C11292:645..261	gap2	ATCEA4S3923	90							
158021	ATU019961	ATL8S24038:272..1	gap2	ATCEA4S13466, ATCEA4S10977, ATCEA4S13352	90, 89, 88, 88							

				, ATCEA4 S10659								
158022	ATU019 962	ATL8C2 3763:3 10..1	gap2	ATCEA4 S27190	90							
158023	ATU019 963	ATL8C2 4263:1 029..2 59	gap2	ATCEA4 C27177 _1	90							
158024	ATU019 964	ATL8C2 4261:3 110..3 536	gap2	ATCEA4 S14448	90							
158025	ATU019 965	ATL8S2 4318:2 10..10 3	gap2	ATCEA4 S28947 , ATCEA4 S18184 , ATCEA4 S15392 , ATCEA4 S16321	90, 88, 87, 85							
158026	ATU019 966	ATL8C2 3898:7 5..219	gap2	ATCEA4 S3096	90							
158027	ATU019 967	ATL8S2 4237:6 54..45 1	gap2	ATCEA4 C188_1	90							
158028	ATU019 968	ATL8C2 390:40 8..704	gap2	ATCEA4 S16849	90							
158029	ATU019 969	ATL8C2 3922:8 ..430	gap2	ATCEA4 S12828	90							
158030	ATU019 970	ATL8C2 4001:8	gap2	ATCEA4 S17769	90							

		29..418										
158031	ATU019971	ATL8C24042:1540..1749	gap2	ATCEA4S30354	90							
158032	ATU019972	ATL8C41469:679..351	gap2	ATCEA4S27634	90							
158033	ATU019973	ATL8C41708:164..265	gap2	ATCEA4S3937	90							
158034	ATU019974	ATL8C41752:13984..13495	gap2	ATCEA4S3937	90							
158035	ATU019975	ATL8C15364:501..107	gap2	ATCEA4C5394_2	90							
158036	ATU019976	ATL8C41887:1..125	gap2	ATCEA4S4678	90							
158037	ATU019977	ATL8C42078:1253..1615	gap2	ATCEA4S126	90							
158038	ATU019978	ATL8C15273:1657..1575	gap2	ATCEA4C26122_1	90							
158039	ATU019979	ATL8C42182:1..173	gap2	ATCEA4C23411_1, ATCEA4S2438	90, 87							
158040	ATU019980	ATL8C42259:2	gap2	ATCEA4C11041	90							

		983..3470		3_1								
158041	ATU0199981	ATL8C45343:372..814	gap2	ATCEA4C21720_1	90							
158042	ATU0199982	ATL8S22422:599..272	gap2	ATCEA4C29067_1	90							
158043	ATU0199983	ATL8C42768:4642..4286	gap2	ATCEA4S178	90							
158044	ATU0199984	ATL8C4291:212..1	gap2	ATCEA4S29838	90							
158045	ATU0199985	ATL8C43623:1458..1986	gap2	ATCEA4C78476_1	90							
158046	ATU0199986	ATL8C43688:1224..617	gap2	ATCEA4C22969_1	90							
158047	ATU0199987	ATL8C43716:7909..8062	gap2	ATCEA4S14459	90							
158048	ATU0199988	ATL8C14097:283..1	gap2	ATCEA4S13901	90							
158049	ATU0199989	ATL8C45086:925..1077	gap2	ATCEA4C5653_1	90							
158050	ATU0199990	ATL8C21329:152..1	gap2	ATCEA4C3267_1	90							
158051	ATU019	ATL8C2	gap2	ATCEA4	90, 82							

	991	7570:2411..2876		S29861, ATCEA4S8164								
158052	ATU019992	ATL8C45021:609..90	gap2	ATCEA4C55786_2	90							
158053	ATU019993	ATL8C44126:1103..798	gap2	ATCEA4C113137_1	90							
158054	ATU019994	ATL8S30187:1..179	gap2	ATCEA4C77580_1	90							
158055	ATU019995	ATL8C442:968..569	gap2	ATCEA4S12925	90							
158056	ATU019996	ATL8C44238:759..356	gap2	ATCEA4S12925	90							
158057	ATU019997	ATL8C44312:482..68	gap2	ATCEA4C9879_1	90							
158058	ATU019998	ATL8C44778:2221..305	gap2	ATCEA4S81	89			g4567296	100	2416	1.3e-218	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
158059	ATU019999	ATL8C44496:1	gap2	ATCEA4S3833	90							

		596..1917										
158060	ATU020000	ATL8C14605:1241..1	gap2	ATCEA4S1127, ATCEA4S561	90, 86							
158061	ATU020001	ATL8C44572:1285..1557	gap2	ATCEA4S11504	90							
158062	ATU020002	ATL8C4474:505..1028	gap2	ATCEA4C156076_1	90							
158063	ATU020003	ATL8C24318:1067..2974	gap2	ATCEA4S81	89			g4567296	100	2329	8.7e-202	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
158064	ATU020004	ATL8C44823:474..1	gap2	ATCEA4S7366	90							
158065	ATU020005	ATL8S26208:56..124	gap2	ATCEA4C23104_1	90							
158066	ATU020006	ATL8C143:568..857	gap2	ATCEA4C3089_1	90							
158067	ATU020007	ATL8C44890:1..288	gap2	ATCEA4S4344	90							

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158068	ATU020008	ATL8C44987:1..90	gap2	ATCEA4S33506	90							
158069	ATU020009	ATL8C450:3404..2848	gap2	ATCEA4S22851	90							
158070	ATU020010	ATL8C50250:4416..5208	gap2	ATCEA4C66239_1	90							
158071	ATU020011	ATL8C45155:483..836	gap2	ATCEA4S1340	90							
158072	ATU020012	ATL8C452:3831..3644	gap2	ATCEA4S3343	90							
158073	ATU020013	ATL8C30926:3423..3594	gap2	ATCEA4C124090_1	90							
158074	ATU020014	ATL8C14408:1312..1691	gap2	ATCEA4S11794	90							
158075	ATU020015	ATL8C14408:1771..1449	gap2	ATCEA4S3610	90							
158076	ATU020016	ATL8C45435:464..579	gap2	ATCEA4S13941	90							
158077	ATU020017	ATL8C45484:1769..2021	gap2	ATCEA4S32210	90							
158078	ATU020	ATL8C1	gap2	ATCEA4	90							

	018	4445:598..477		S36263								
158079	ATU020019	ATL8C41404:587..1209	gap2	ATCEA4C32042_1	90							
158080	ATU020020	ATL8S1891:1..230	gap2	ATCEA4S27083	90							
158081	ATU020021	ATL8C22073:1729..1555	gap2	ATCEA4S9663	90							
158082	ATU020022	ATL8C22064:1466..2454	gap2	ATCEA4C18990_1	90							
158083	ATU020023	ATL8S18320:87..254	gap2	ATCEA4C7283_1	90							
158084	ATU020024	ATL8C22047:330..1	gap2	ATCEA4C1832_1	90							
158085	ATU020025	ATL8C25144:1063..607	gap2	ATCEA4S33582	90							
158086	ATU020026	ATL8S18265:220..451	gap2	ATCEA4S4741	90							
158087	ATU020027	ATL8S19382:225..164	gap2	ATCEA4C21346_1	90							
158088	ATU020028	ATL8S18181:205..1	gap2	ATCEA4S28947	90							
158089	ATU020	ATL8C4	gap2	ATCEA4	90							

	029	5785:4377..4732		S178								
158090	ATU020030	ATL8C45785:5504..5131	gap2	ATCEA4S344	90							
158091	ATU020031	ATL8S17610:208..317	gap2	ATCEA4S13622	90							
158092	ATU020032	ATL8S17575:524..1	gap2	ATCEA4S19351	90							
158093	ATU020033	ATL8C11048:314..532	gap2	ATCEA4C363_1	90							
158094	ATU020034	ATL8C45878:336..508	gap2	ATCEA4S19259	90							
158095	ATU020035	ATL8C10235:754..349	gap2	ATCEA4S31045,ATCEA4S27028	90, 87							
158096	ATU020036	ATL8S17100:354..511	gap2	ATCEA4C3265_1	90							
158097	ATU020037	ATL8S21204:403..146	gap2	ATCEA4C6450_1	90							
158098	ATU020038	ATL8C4595:1..266	gap2	ATCEA4S15131	90							
158099	ATU020039	ATL8C46009:4	gap2	ATCEA4S27155	90							

		039..3850										
158100	ATU020040	ATL8S17009:77..1	gap2	ATCEA4S35993	90							
158101	ATU020041	ATL8C11025:1139..1016	gap2	ATCEA4S19180	90							
158102	ATU020042	ATL8C205:1661..1866	gap2	ATCEA4C31278_2, ATCEA4S16423	90, 87							
158103	ATU020043	ATL8S16588:204..101	gap2	ATCEA4S36264	90							
158104	ATU020044	ATL8C21833:272..68	gap2	ATCEA4C730732	90							
158105	ATU020045	ATL8C21814:2560..2769	gap2	ATCEA4S2802	90							
158106	ATU020046	ATL8S16469:367..563	gap2	ATCEA4C34575_1	90							
158107	ATU020047	ATL8C21755:1..231	gap2	ATCEA4C8616_1	90							
158108	ATU020048	ATL8S21922:157..393	gap2	ATCEA4S31861	90							
158109	ATU020049	ATL8C25407:702..1119	gap2	ATCEA4C107812_1	90							

158110	ATU020050	ATL8S15614:268..1	gap2	ATCEA4C10737_1	90							
158111	ATU020051	ATL8S15409:1..208	gap2	ATCEA4S658	90							
158112	ATU020052	ATL8C21675:1..296	gap2	ATCEA4C75628_1	90							
158113	ATU020053	ATL8C21639:1..608	gap2	ATCEA4S34687	90							
158114	ATU020054	ATL8S2019:145..1	gap2	ATCEA4C116323_2, ATCEA4C116323_1	90, 89							
158115	ATU020055	ATL8S14399:83..538	gap2	ATCEA4S12925	90							
158116	ATU020056	ATL8S14294:85..1	gap2	ATCEA4S35993	90							
158117	ATU020057	ATL8S13980:146..447	gap2	ATCEA4S800	90							
158118	ATU020058	ATL8S22893:1..324	gap2	ATCEA4S35028, ATCEA4C25507_1	90, 89							
158119	ATU020059	ATL8C32995:393..111	gap2	ATCEA4S26717	90							
158120	ATU020060	ATL8C26363:1	gap2	ATCEA4C33066	90							

		..229		_1								
158121	ATU020061	ATL8C42482:132..516	gap2	ATCEA4C5225_1	90							
158122	ATU020062	ATL8S1371:166..1	gap2	ATCEA4S12310	90							
158123	ATU020063	ATL8S23172:231..1	gap2	ATCEA4S2730	90							
158124	ATU020064	ATL8C21317:645..1006	gap2	ATCEA4S126	90							
158125	ATU020065	ATL8S3302:114..1	gap2	ATCEA4S29012, ATCEA4C1861_1	90, 90							
158126	ATU020066	ATL8C2556:784..851	gap2	ATCEA4S13894	90							
158127	ATU020067	ATL8C10747:1379..1029	gap2	ATCEA4S2532, ATCEA4S32643	90, 84							
158128	ATU020068	ATL8S13289:82..1	gap2	ATCEA4S35993	90							
158129	ATU020069	ATL8C37299:342..1	gap2	ATCEA4S31182, ATCEA4S17033	90, 82							
158130	ATU020070	ATL8C10764:1433..2054	gap2	ATCEA4C132996_1	90							

158131	ATU020071	ATL8S13000:76..1	gap2	ATCEA4S35993	90							
158132	ATU020072	ATL8S12983:118..1	gap2	ATCEA4S4812	90							
158133	ATU020073	ATL8S12914:482..92	gap2	ATCEA4C3957_1	90							
158134	ATU020074	ATL8C10929:1..147	gap2	ATCEA4S23808	90							
158135	ATU020075	ATL8S12863:377..1	gap2	ATCEA4S2163	90							
158136	ATU020076	ATL8S12721:1..228	gap2	ATCEA4S18184	90							
158137	ATU020077	ATL8S12613:84..1	gap2	ATCEA4S35993	90							
158138	ATU020078	ATL8S24534:170..1	gap2	ATCEA4S33501	90							
158139	ATU020079	ATL8S12565:1..117	gap2	ATCEA4S29627	90							
158140	ATU020080	ATL8S24613:259..461	gap2	ATCEA4C30170_1	90							
158141	ATU020081	ATL8C37758:3824..3571	gap2	ATCEA4C49557_1	90							
158142	ATU020082	ATL8S24707:142..1	gap2	ATCEA4S4290	90							
158143	ATU020	ATL8S1	gap2	ATCEA4	90							

	083	2282:97..1		S35993								
158144	ATU020084	ATL8S25249:1..301	gap2	ATCEA4S4084	90							
158145	ATU020085	ATL8S12157:90..1	gap2	ATCEA4S35993	90							
158146	ATU020086	ATL8S11887:1..509	gap2	ATCEA4C16186_1	90							
158147	ATU020087	ATL8C25701:812..1287	gap2	ATCEA4S32266	90							
158148	ATU020088	ATL8C8206:26..1036	gap2	ATCEA4C56655_1	89			g3004560	100	906	1.8e-40	(AC003673) putative ATP binding protein [Arabidopsis thaliana]
158149	ATU020089	ATL8C2961:676..1232	gap2	ATCEA4S21776, ATCEA4S33942, ATCEA4C619_2, ATCEA4S28959	90, 90, 89, 87							
158150	ATU020090	ATL8C25806:5	gap2	ATCEA4S892	90							

		..210										
158151	ATU020091	ATL8S2588:1..318	gap2	ATCEA4S34066	90							
158152	ATU020092	ATL8S13357:510..140	gap2	ATCEA4C8970_3	90							
158153	ATU020093	ATL8C40676:729..217	gap2	ATCEA4S14881	90							
158154	ATU020094	ATL8C33016:627..839	gap2	ATCEA4S26203	90							
158155	ATU020095	ATL8C46684:3274..3517	gap2	ATCEA4S3937	90							
158156	ATU020096	ATL8C20746:6356..5986	gap2	ATCEA4S27391	90							
158157	ATU020097	ATL8C37197:2575..4494	gap2	ATCEA4S27401	89			g4309868	100	2610		(AC006527) putative retrotransposon-like orf [Arabidopsis thaliana]
158158	ATU020098	ATL8S26459:32..351	gap2	ATCEA4S3009	90							

158159	ATU020099	ATL8S2646:1..111	gap2	ATCEA4S4154	90							
158160	ATU020100	ATL8S10737:85..1	gap2	ATCEA4S35993	90							
158161	ATU020101	ATL8S10696:503..278	gap2	ATCEA4S2182	90							
158162	ATU020102	ATL8S10506:513..1	gap2	ATCEA4C158219_1	90							
158163	ATU020103	ATL8S27230:229..103	gap2	ATCEA4C117366_1	90							
158164	ATU020104	ATL8S27320:1..160	gap2	ATCEA4S1306	90							
158165	ATU020105	ATL8S10356:292..223	gap2	ATCEA4S25875	90							
158166	ATU020106	ATL8S27479:1..262	gap2	ATCEA4C82248_1	90							
158167	ATU020107	ATL8C34711:289..83	gap2	ATCEA4C38121_1	90							
158168	ATU020108	ATL8C9718:76..1	gap2	ATCEA4C105847_1	90							
158169	ATU020109	ATL8S27670:124..1	gap2	ATCEA4S7423	90							
158170	ATU020110	ATL8C47787:7717..8059	gap2	ATCEA4C23839_1	90							

158171	ATU020111	ATL8C9515:868..489	gap2	ATCEA4S81	90							
158172	ATU020112	ATL8C94:1..424	gap2	ATCEA4S20141	90							
158173	ATU020113	ATL8C9384:3651..3138	gap2	ATCEA4S33721	90							
158174	ATU020114	ATL8C42768:3801..1	gap2	ATCEA4S27399	89			g3695399, g4773908	100, 92	1658, 2949	1.0e-184, 1.2e-286	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis

												thaliana]
158175	ATU020115	ATL8C9209:6224..5732	gap2	ATCEA4S3937	90							
158176	ATU020116	ATL8C10837:4362..3850	gap2	ATCEA4S29704	90							
158177	ATU020117	ATL8C8934:379..470	gap2	ATCEA4S3326	90							
158178	ATU020118	ATL8C26213:1505..1796	gap2	ATCEA4C122094_1	90							
158179	ATU020119	ATL8C885:84..1	gap2	ATCEA4S27083	90							
158180	ATU020120	ATL8S28920:1..62	gap2	ATCEA4S29348, ATCEA4S29321	90, 88							
158181	ATU020121	ATL8S2898:284..551	gap2	ATCEA4S7	90							
158182	ATU020122	ATL8S16650:100..489	gap2	ATCEA4S36101, ATCEA4C48483_1	90, 83							
158183	ATU020123	ATL8C8800:500..353	gap2	ATCEA4S5906	90							
158184	ATU020124	ATL8C8793:1907..20	gap2	ATCEA4C141911	90							

		71										
158185	ATU020125	ATL8C8712:222..643	gap2	ATCEA4S23207, ATCEA4S25237	90, 87							
158186	ATU020126	ATL8C26273:1084..1586	gap2	ATCEA4C103841_1	90							
158187	ATU020127	ATL8C18916:764..1	gap2	ATCEA4C375_1, ATCEA4C375_2	89, 87			g2980803	100	999	1.2e-91	(AL022197) transcriptional activator CBF1 - like protein [Arabidopsis thaliana]
158188	ATU020128	ATL8C48687:1429..1527	gap2	ATCEA4C19275_1	90							
158189	ATU020129	ATL8C11739:1421..1648	gap2	ATCEA4S28228, ATCEA4S28222, ATCEA4S28225, ATCEA4S17136	90, 90, 87, 87, 83							

				ATCEA4S28227								
158190	ATU020130	ATL8C8397:961..488	gap2	ATCEA4S31184	90							
158191	ATU020131	ATL8C2791:1421..1038	gap2	ATCEA4C574_1	90							
158192	ATU020132	ATL8C8190:174..68	gap2	ATCEA4C100713_1	90							
158193	ATU020133	ATL8C20115:192..535	gap2	ATCEA4C98211_1	90							
158194	ATU020134	ATL8C29533:554..470	gap2	ATCEA4S1405	90							
158195	ATU020135	ATL8C7824:99..546	gap2	ATCEA4S16890	90							
158196	ATU020136	ATL8S30505:1..213	gap2	ATCEA4S34677	90							
158197	ATU020137	ATL8C13540:294..502	gap2	ATCEA4S11386	90							
158198	ATU020138	ATL8C47038:1288..1083	gap2	ATCEA4S3937	90							
158199	ATU020139	ATL8C20078:256..837	gap2	ATCEA4S27966	90							
158200	ATU020	ATL8C2	gap2	ATCEA4	90							

	140	0071:653..233		S33485								
158201	ATU020141	ATL8S31035:1..252	gap2	ATCEA4S34362	90							
158202	ATU020142	ATL8S9732:503..617	gap2	ATCEA4C5246_1	90							
158203	ATU020143	ATL8C7437:830..937	gap2	ATCEA4S135	90							
158204	ATU020144	ATL8S3184:215..479	gap2	ATCEA4S27426	90							
158205	ATU020145	ATL8S3208:204..1	gap2	ATCEA4C28240_1	90							
158206	ATU020146	ATL8C730:1147..547	gap2	ATCEA4S35392	90							
158207	ATU020147	ATL8C26542:440..342	gap2	ATCEA4S6034	90							
158208	ATU020148	ATL8C40271:523..244	gap2	ATCEA4S11406	90							
158209	ATU020149	ATL8C19854:1978..2355	gap2	ATCEA4S81	90							
158210	ATU020150	ATL8S3405:385..293	gap2	ATCEA4S593	90							
158211	ATU020151	ATL8C33517:1217..1505	gap2	ATCEA4S30103	90							

158212	ATU020152	ATL8C6990:565..738	gap2	ATCEA4S26255	90							
158213	ATU020153	ATL8C16179:328..1	gap2	ATCEA4S11071	90							
158214	ATU020154	ATL8C6740:246..135	gap2	ATCEA4S34830	90							
158215	ATU020155	ATL8C12233:1299..906	gap2	ATCEA4C29776_1, ATCEA4S4349	90, 83							
158216	ATU020156	ATL8C47432:455..90	gap2	ATCEA4S14462	90							
158217	ATU020157	ATL8S3625:93..1	gap2	ATCEA4S35993	90							
158218	ATU020158	ATL8C6737:2086..1466	gap2	ATCEA4C4332_1	90							
158219	ATU020159	ATL8C6656:7191..7614	gap2	ATCEA4S145	90							
158220	ATU020160	ATL8S398:198..463	gap2	ATCEA4C32491_1	90							
158221	ATU020161	ATL8C19767:687..442	gap2	ATCEA4S7050	90							
158222	ATU020162	ATL8C19750:2138..1768	gap2	ATCEA4S1257	90							
158223	ATU020	ATL8C6	gap2	ATCEA4	90							

	163	423:28..487		C131074_1								
158224	ATU020164	ATL8C26674:816..680	gap2	ATCEA4S27334	90							
158225	ATU020165	ATL8C29683:1..185	gap2	ATCEA4S25339	90							
158226	ATU020166	ATL8C5912:520..981	gap2	ATCEA4S34981	90							
158227	ATU020167	ATL8C5783:584..840	gap2	ATCEA4C100713_1	90							
158228	ATU020168	ATL8C19594:704..841	gap2	ATCEA4C84135_1	90							
158229	ATU020169	ATL8C1959:268..1	gap2	ATCEA4S1031	90							
158230	ATU020170	ATL8C39948:397..1	gap2	ATCEA4C61254_2	90							
158231	ATU020171	ATL8C42524:1..206	gap2	ATCEA4C54594_1	90							
158232	ATU020172	ATL8S5649:585..305	gap2	ATCEA4S8435	90							
158233	ATU020173	ATL8C5504:1503..506	gap2	ATCEA4S26238	90							
158234	ATU020174	ATL8C47809:1..250	gap2	ATCEA4C84306_1	90							
158235	ATU020	ATL8S5	gap2	ATCEA4	90							

	175	954:73..1		S29321								
158236	ATU020176	ATL8C5484:408..770	gap2	ATCEA4S12097	90							
158237	ATU020177	ATL8S6230:1..310	gap2	ATCEA4S32050	90							
158238	ATU020178	ATL8C16000:207..391	gap2	ATCEA4S11585	90							
158239	ATU020179	ATL8S6245:1..257	gap2	ATCEA4S29075	90							
158240	ATU020180	ATL8C5161:1..279	gap2	ATCEA4S35744	90							
158241	ATU020181	ATL8S636:380..232	gap2	ATCEA4S3087	90							
158242	ATU020182	ATL8C5159:411..516	gap2	ATCEA4S30662	90							
158243	ATU020183	ATL8C39859:2783..3138	gap2	ATCEA4S178	90							
158244	ATU020184	ATL8C39821:721..561	gap2	ATCEA4S13926	90							
158245	ATU020185	ATL8C19221:88..559	gap2	ATCEA4S26977	90							
158246	ATU020186	ATL8S658:389..168	gap2	ATCEA4S178	90							
158247	ATU020	ATL8C2	gap2	ATCEA4	90							

	187	6749:615..378		S11822								
158248	ATU020188	ATL8C50144:488..1247	gap2	ATCEA4S3313	90							
158249	ATU020189	ATL8S6707:175..102	gap2	ATCEA4S7765	90							
158250	ATU020190	ATL8C49963:974..284	gap2	ATCEA4S35759	90							
158251	ATU020191	ATL8C49952:386..1	gap2	ATCEA4S32517	90							
158252	ATU020192	ATL8C49749:6201..6562	gap2	ATCEA4C13016_1	90							
158253	ATU020193	ATL8C49703:1..176	gap2	ATCEA4S13054	90							
158254	ATU020194	ATL8C18933:1..321	gap2	ATCEA4S18323	90							
158255	ATU020195	ATL8C49452:1466..1956	gap2	ATCEA4S3937	90							
158256	ATU020196	ATL8S709:587..436	gap2	ATCEA4C18322_1	90							
158257	ATU020197	ATL8C18877:1..531	gap2	ATCEA4S34777	90							
158258	ATU020198	ATL8C19325:175..1	gap2	ATCEA4C28777_1	90							

158259	ATU020199	ATL8C2974:769..134	gap2	ATCEA4S3707	90							
158260	ATU020200	ATL8C18851:799..1257	gap2	ATCEA4S4084	90							
158261	ATU020201	ATL8C49250:1627..1788	gap2	ATCEA4C1548_8	90							
158262	ATU020202	ATL8C49141:1261..968	gap2	ATCEA4S5018	90							
158263	ATU020203	ATL8C18799:580..1	gap2	ATCEA4C64232_1	90							
158264	ATU020204	ATL8C18783:727..1008	gap2	ATCEA4C15709_1	90							
158265	ATU020205	ATL8C47998:1113..1630	gap2	ATCEA4C120481_1	90							
158266	ATU020206	ATL8C39667:879..1048	gap2	ATCEA4S5944	90							
158267	ATU020207	ATL8S7994:1..323	gap2	ATCEA4S4374	90							
158268	ATU020208	ATL8S8079:1..280	gap2	ATCEA4S3903	90							
158269	ATU020209	ATL8C48997:1617..1447	gap2	ATCEA4C5975_1	90							

158270	ATU020210	ATL8S8194:337..1	gap2	ATCEA4S31513	90							
158271	ATU020211	ATL8C26915:3861..3933	gap2	ATCEA4S34257	90							
158272	ATU020212	ATL8S8547:543..282	gap2	ATCEA4S34755	90							
158273	ATU020213	ATL8C48815:220..616	gap2	ATCEA4S35416	90							
158274	ATU020214	ATL8S8742:153..1	gap2	ATCEA4S18767	90							
158275	ATU020215	ATL8C18519:782..479	gap2	ATCEA4S26542	90							
158276	ATU020216	ATL8C48032:90..1	gap2	ATCEA4S25986	90							
158277	ATU020217	ATL8S13937:280..479	gap2	ATCEA4C3222_1	90							
158278	ATU020218	ATL8C48039:834..443	gap2	ATCEA4S11794	90							
158279	ATU020219	ATL8C48460:1460..1278	gap2	ATCEA4S33241	90							
158280	ATU020220	ATL8S909:115..223	gap2	ATCEA4S1006	90							
158281	ATU020	ATL8C4	gap2	ATCEA4	90							

	221	8370:520..743		S1932								
158282	ATU020222	ATL8C15705:2228..1794	gap2	ATCEA4S21013	90							
158283	ATU020223	ATL8S9146:1...177	gap2	ATCEA4S12985	90							
158284	ATU020224	ATL8C27094:735..844	gap2	ATCEA4S35536	90							
158285	ATU020225	ATL8C30008:1958..2096	gap2	ATCEA4C5388_1	90							
158286	ATU020226	ATL8C27192:186..1	gap2	ATCEA4S30350	90							
158287	ATU020227	ATL8C4816:1529..1332	gap2	ATCEA4S3345	90							
158288	ATU020228	ATL8C39164:2202..2691	gap2	ATCEA4S3937	90							
158289	ATU020229	ATL8C39006:1..330	gap2	ATCEA4S178	90							
158290	ATU020230	ATL8S558:576..1	gap2	ATCEA4C101446_1	90							
158291	ATU020231	ATL8C13330:2806..2268	gap2	ATCEA4S22419	90							
158292	ATU020	ATL8C1	gap2	ATCEA4	90							

	232	0461:743..444		S33411								
158293	ATU0202233	ATL8C39406:449..309	gap2	ATCEA4C8078_1	90							
158294	ATU0202234	ATL8S30545:414..504	gap2	ATCEA4C78685_1	90							
158295	ATU0202235	ATL8C13253:1734..1301	gap2	ATCEA4S24797	90							
158296	ATU0202236	ATL8S9922:1..239	gap2	ATCEA4C7270_1	90							
158297	ATU0202237	ATL8S22040:533..189	gap2	ATCEA4S14418, ATCEA4S24237, ATCEA4S15491, ATCEA4S14596, ATCEA4S14155, ATCEA4S15160, ATCEA4S14618, ATCEA4	90, 88, 88, 87, 87, 87, 86, 86, 85, 85, 84, 83, 83, 82							

				S14698, ATCEA4S24017, ATCEA4S14885, ATCEA4S14764, ATCEA4S14348, ATCEA4S22320, ATCEA4S14798								
158298	ATU020238	ATL8C29978:3026..1485	gap2	ATCEA4S31964	89			g3928102	100	610	3.7e-38	(AC005770) putative protein kinase [Arabidopsis thaliana]
158299	ATU020239	ATL8C32225:1..633	gap2	ATCEA4C34_1	89	ATL8C32225:172..294	0.98	g267122	99	309	1.1e-30	THIOREDOXIN H-TYPE (TRX-H) [Arabidopsis thaliana]
158300	ATU020	ATL8C6	gap2	ATCEA4	89	ATL8C6	0.96	g73058	99	299	2.4e-	60S

	240	379:414..1181		S34566		379:414..1093		3			05	ACIDIC RIBOSOMAL PROTEIN P2 [Parthenium argentatum]
158301	ATU0240241	ATL8C16654:1..1430	gap2	ATCEA4S4404, ATCEA4C703_1	89, 85	ATL8C16654:126..1379	0.96	g4678210	99	453	7.4e-46	(AC007134) hypothetical protein [Arabidopsis thaliana]
158302	ATU0240242	ATL8C44116:517..2471	gap2	ATCEA4S31080	89	ATL8C44116:517..2471	0.79	g2262176	99	235	1.2e-16	(AC002329) putative RING zinc-finger protein [Arabidopsis thaliana]
158303	ATU0240243	ATL8C43489:357..883	gap2	ATCEA4C74657_1	89	ATL8C43489:560..761	0.78	g4914316	99	403		(AC005489) F14N23.2 [Arabidopsis thaliana]

158304	ATU020244	ATL8C37470:3311..1911	gap2	ATCEA4S31534	89	ATL8C37470:3311..2265	0.70	g4760343	99	175		(AL049769) putative SNRNP SM-like protein [Schizosaccharomyces pombe]
158305	ATU020245	ATL8C31275:2336..2684	gap2	ATCEA4S29826	89	ATL8C31275:2336..2642	0.66	g2194118	99	337	7.9e-29	(AC002062) F20P5.4 gene product [Arabidopsis thaliana]
158306	ATU020246	ATL8C14515:7931..5158	gap2	ATCEA4S178	89	ATL8C14515:7931..5520	0.61	g4558675	99	517	5.0e-16	(AC006586) hypothetical protein [Arabidopsis thaliana]
158307	ATU020247	ATL8C49377:1711..508	gap2	ATCEA4S34398	89	ATL8C49377:1711..508	0.47	g4586261	99	824	2.6e-73	(AL049640) putative protein

												[Arabidopsis thaliana]
158308	ATU020248	ATL8C36837:1585..577	gap2	ATCEA4C4355_6, ATCEA4S25394	89, 87			g4581180	99	726	0.41	(AC006220) putative glycine-rich protein [Arabidopsis thaliana]
158309	ATU020249	ATL8C12034:1800..1130	gap2	ATCEA4S35304	89			g4587561	99	318	7.6e-25	(AC006577) F15I1.28 [Arabidopsis thaliana]
158310	ATU020250	ATL8C17037:3885..572	gap2	ATCEA4C55881_1, ATCEA4S10404	89, 85	ATL8C17037:3792..572	0.81	g2492952	98	1378	2.2e-113	CHORISMATE SYNTHASE 1 PRECURSOR (5-ENOLPYRUVYLSHIKIMATE-3-PHOSPHATE PHOSPHOLYASE 1)

												[Lycopersicon esculentum]
158311	ATU020251	ATL8C46106:1849..1	gap2	ATCEA4S7990	89	ATL8C46106:1849..85	0.60	g3236248	96	1296	2.4e-126	(AC004684) unknown protein [Arabidopsis thaliana]
158312	ATU020252	ATL8C32761:3509..1	gap2	ATCEA4S253, ATCEA4S178	89, 86	ATL8C32761:766..26, ATL8C32761:3303..1172	0.40, 0.74	g4038066, g3695395	95, 86	586, 1926	2.0e-15, 1.7e-188	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AF096372) contains similarity to reverse transcriptase (Pfam: PF00078 rvt,

												E=4.3e-08) [Arabidopsis thaliana]
158313	ATU020253	ATL8C19297:1435..1	gap2	ATCEA4C19491_1, ATCEA4S27119	89, 83			g4415925	94	2274	1.2e-225	(AC006282) putative glucosyl transferase [Arabidopsis thaliana]
158314	ATU020254	ATL8C23363:1923..145	gap2	ATCEA4S11082	89	ATL8C23363:981..460	0.67	g3695396	92	1817	7.9e-150	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
158315	ATU020	ATL8C1	gap2	ATCEA4	89, 85	ATL8C1	0.73	g30804	90	933	1.2e-	(AL022

	255	3152:129..1647		S33016, ATCEA4S35572		3152:263..961		01			86	603) putative protein [Arabidopsis thaliana]
158316	ATU020256	ATL8C31411:1790..457	gap2	ATCEA4C54462_2, ATCEA4S34635	89, 84	ATL8C31411:1746..457	0.83	g4455203	89	817	1.9e-82	(AL035440) putative protein [Arabidopsis thaliana]
158317	ATU020257	ATL8C33727:1..1536	gap2	ATCEA4S35486, ATCEA4S28663	89, 86	ATL8C33727:108..1450	0.94	g1313926	87	365	1.5e-19	(X97677) non intermediate filament IFA binding protein [Brassica oleracea]
158318	ATU020258	ATL8C16993:2137..1265	gap2	ATCEA4S30774, ATCEA4C113971_1	89, 87	ATL8C16993:2011..1328	0.84	g2467274	87	176	2.2e-13	(Z99759) rna binding protein [Schiz

												osaccharomyces pombe]
158319	ATU020259	ATL8C35851:10..867	gap2	ATCEA4C14332_1, ATCEA4C57480_1	89, 86	ATL8C35851:153..785	0.55	g266936	87	428	5.4e-45	50S RIBOSOMAL PROTEIN L27, CHLOROPLAST PRECURSOR (CL27) [Nicotiana tabacum]
158320	ATU020260	ATL8C31309:1..4253	gap2	ATCEA4S33783	89	ATL8C31309:64..4253	0.96	g4467125	85	3487	0.0	(AL035538) putative protein [Arabidopsis thaliana]
158321	ATU020261	ATL8C9336:238..1565	gap2	ATCEA4C29800_1	89	ATL8C9336:256..1530	0.92	g4467135	85	836	9.6e-85	(AL035540) putative protein [Arabidopsis thaliana]
158322	ATU020262	ATL8C49597:1	gap2	ATCEA4C13513	89	ATL8C49597:1	0.89	g3122671	85	804	3.6e-61	HYPOTHETICAL

		..1076		7_1		96..910						RAE1-LIKE PROTEIN [Arabidopsis thaliana]
158323	ATU020263	ATL8C37693:1158..1	gap2	ATCEA4C2266_1	89	ATL8C37693:1024..278	0.76	g4587559	85	390	6.5e-44	(AC006577) Contains similarity to gb|Y13722 Hap2c Transcription factor from Arabidopsis thaliana. []
158324	ATU020264	ATL8C31169:1402..125	gap2	ATCEA4C18423_1, ATCEA4C99361_1, ATCEA4S1745	89, 84, 84	ATL8C31169:1397..152	0.96	g2880051	84	1329	1.2e-145	(AC002340) putative protein kinase [Arabidopsis thaliana]
158325	ATU020265	ATL8C19371:3	gap2	ATCEA4C42331	89	ATL8C19371:3	0.61	g4773920,	84, 57	1927, 2125	1.9e-186,	(AF147259)

		472..8198		_1		523..6722		g4325351			8.1e-211	F10A2.17 gene product [Arabidopsis thaliana]; (AF128394) similar to Antirrhinum majus (garden snapdragon) TNP2 protein (GB:X57297) [Arabidopsis thaliana]
158326	ATU020266	ATL8C34961:1..883	gap2	ATCEA4C17147_1	89	ATL8C34961:504..830	0.45	g2500376	84	295	1.5e-30	60S RIBOSOMAL PROTEIN L34 [Arabidopsis thaliana]
158327	ATU020267	ATL8C10431:3	gap2	ATCEA4S178,	89, 86			g4773920,	84, 35	2650, 251		(AF147259)

		625..1		ATCEA4S253				g4263768				F10A2.17 gene product [Arabidopsis thaliana]; (AC006218) hypothetical protein [Arabidopsis thaliana]
158328	ATU020268	ATL8C2 2992:1507..210	gap2	ATCEA4C899_1	89	ATL8C2 2992:1459..482	0.82	g1346760	83	1262	1.4e-128	SERINE/THREONINE PROTEIN PHOSPHATASE PP1 ISOZYME 6 [Arabidopsis thaliana]
158329	ATU020269	ATL8C2 1711:1962..1	gap2	ATCEA4S5206	89	ATL8C2 1711:1770..41	0.79	g4733981	83	1141	3.3e-81	(AC007268) putative serine carboxypepti

												dase [Arabidopsis thaliana]
158330	ATU020270	ATL8C10973:901..1537	gap2	ATCEA4C312_1	89	ATL8C10973:948..1486	0.44	g231700	83	656	6.6e-60	22 KD CALMODULIN-LIKE CALCIUM-BINDING PROTEIN (CABP-22) [Arabidopsis thaliana]
158331	ATU020271	ATL8C44457:3925..1505	gap2	ATCEA4S31051, ATCEA4S34416	89, 87			g4455360	83	635	1.3e-67	(AL035524) putative protein [Arabidopsis thaliana]
158332	ATU020272	ATL8C17774:563..3796	gap2	ATCEA4S3937, ATCEA4S11406	89, 86			g4773910, g3377816	83, 59	199, 482	4.1e-14, 2.5e-48	(AF147259) No definition line found [Arabidopsis

												thaliana]; (AF076275) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
158333	ATU020273	ATL8C23249:14..515	gap2	ATCEA4S10990	89	ATL8C23249:78..489	0.61	g81624	82	675	3.8e-36	glycine-rich protein 2 - Arabidopsis thaliana [Arabidopsis thaliana]
158334	ATU020274	ATL8C35389:1..1449	gap2	ATCEA4C102412_1, ATCEA4C10241	89, 88			g2979562	79	1304	6.0e-116	(AC003680) unknown protei

				2_2								n [Arabidopsis thaliana]
158335	ATU020275	ATL8C3681:9154..6891	gap2	ATCEA4S27399	89			g4773908	79	2546	9.1e-230	(AF147259) No definition line found [Arabidopsis thaliana]
158336	ATU020276	ATL8C20132:1..635	gap2	ATCEA4C3207_2, ATCEA4C3207_1	89, 87	ATL8C20132:1..569	0.88	g2129788	78	396		biotin carboxyl carrier protein (clone BP7) - rape (fragment) [Brassica napus]
158337	ATU020277	ATL8C42032:1..6081	gap2	ATCEA4C2732_1	89	ATL8C42032:54..4148	0.51	g4773910, g4581175, g4836903	78, 62, 33	348, 2816, 264	1.1e-18, 3.7e-269, 1.1e-12	(AF147259) No definition line found [Arabidopsis

												thaliana]; (AC006220) putative transposon MuDR protein [Arabidopsis thaliana]; (AC007369) Similar to phosphate transporter proteins [Arabidopsis thaliana]
158338	ATU020278	ATL8C33855:1066..1	gap2	ATCEA4C121745_1	89	ATL8C33855:990..295	0.45	g4006915	77	123		(Z99708) hypothetical protein [Arabidopsis thaliana]
158339	ATU020	ATL8C1	gap2	ATCEA4	89	ATL8C1	0.86	g38112	73	619	1.5e-	(AF032

	279	8218:1092..92		S35597		8218:954..250		93			62	465) putative serine/threonine protein kinase [Nicotiana tabacum]
158340	ATU020280	ATL8C638:1..2984	gap2	ATCEA4S1006	89	ATL8C638:94..2984	0.63	g4263063	72	1681	9.7e-150	(AC005142) hypothetical protein [Arabidopsis thaliana]
158341	ATU020281	ATL8C28908:487..1	gap2	ATCEA4C33505_1	89	ATL8C28908:487..97	0.68	g3738331	71	110	4.6e-08	(AC005170) unknown protein [Arabidopsis thaliana]
158342	ATU020282	ATL8C29645:309..653	gap2	ATCEA4C116039_1	89	ATL8C29645:313..650	0.97	g4584110	70	180	1.0e-15	(AJ133639) SAH7 protein [Arabidopsis

												thaliana]
158343	ATU020283	ATL8C16665:1..1249	gap2	ATCEA4S28618, ATCEA4S32965	89, 89	ATL8C16665:122..1249	0.52	g3201632	69	1165	5.2e-121	(AC004669) putative 2A6 protein [Arabidopsis thaliana]
158344	ATU020284	ATL8C44096:4010..1	gap2	ATCEA4S344	89	ATL8C44096:3937..27	0.67	g4734013	68	2777	8.6e-269	(AC007112) putative TNP1 of the Tam1 transposon [Arabidopsis thaliana]
158345	ATU020285	ATL8C28772:1..1017	gap2	ATCEA4C15_1	89	ATL8C28772:167..956	0.95	g2144183	67	252	6.7e-24	DNA-directed RNA polymerase (EC 2.7.7.6) chain III - Ecotype Columbia [Arabi

												dopsis thaliana]
158346	ATU020286	ATL8C16751:1..1037	gap2	ATCEA4C99361_1	89	ATL8C16751:21..929	0.91	g2880051	66	862	6.9e-95	(AC002340) putative protein kinase [Arabidopsis thaliana]
158347	ATU020287	ATL8C25797:699..1	gap2	ATCEA4S36355	89	ATL8C25797:628..104	0.66	g3941472	66	527	1.5e-50	(AF062890) putative transcription factor [Arabidopsis thaliana]
158348	ATU020288	ATL8C26627:1957..1	gap2	ATCEA4S14781	89	ATL8C26627:1913..618	0.45	g2191161	66	1279	1.9e-133	(AF007270) contains similarity to B. subtilus flagellar biosynthesis protei

												n FLHA (SW:P35620) [Arabidopsis thaliana]
158349	ATU020289	ATL8C36728:1893..1	gap2	ATCEA4C63586_1	89	ATL8C36728:1550..116	1.00	g3927836	65	317	1.6e-39	(AC005727) unknown protein [Arabidopsis thaliana]
158350	ATU020290	ATL8C22154:837..1	gap2	ATCEA4C35822_1	89	ATL8C22154:569..182	0.69	g2832697	65	462	3.5e-39	(AL021713) putative protein [Arabidopsis thaliana]
158351	ATU020291	ATL8C36262:1265..926	gap2	ATCEA4S29511	89			g4309701	65	488	2.6e-19	(AC006266) hypothetical protein [Arabidopsis thaliana]
158352	ATU020292	ATL8C39763:695..1	gap2	ATCEA4C3969_1	89	ATL8C39763:504..77	0.72	g4388826	64	1058	6.9e-108	(AC006528) hypoth

												etical protein [Arabidopsis thaliana]
158353	ATU0202 93	ATL8C11736:2016..1	gap2	ATCEA4S24600	89	ATL8C11736:1694..39	0.82	g1652084	63	153	5.4e-10	(D90902) hypothetical protein [Synechocystis sp.]
158354	ATU0202 94	ATL8C22902:1200..1	gap2	ATCEA4S35372	89			g1346106	63	1092	3.0e-117	GUANINE NUCLEOTIDE-BINDING PROTEIN BETA SUBUNIT [Arabidopsis thaliana]
158355	ATU0202 95	ATL8S20548:1..512	gap2	ATCEA4C4984_1	89	ATL8S20548:21..480	0.80	g992706	61	400	1.1e-21	(U33758) UBC13 [Arabidopsis thaliana]
158356	ATU0202 96	ATL8C23423:5	gap2	ATCEA4S27393	89	ATL8C23423:5	0.68	g3377830	61	1365	2.3e-120	(AF075598)

		18..2449				18..2398						contains similarity to Aplysia californica intermediate filament protein A (GB:X60297) [Arabidopsis thaliana]
158357	ATU020297	ATL8C47181:2110..1	gap2	ATCEA4C5365_1	89	ATL8C47181:2040..184	0.77	g832876	60	768	2.3e-51	(L41345) ascorbate free radical reductase [Lycopersicon esculentum]
158358	ATU020298	ATL8C31236:728..1	gap2	ATCEA4C4811_1	89	ATL8C31236:600..107	0.90	g4490737	59	207	3.0e-25	(AL035708) putative protei

												n [Arabidopsis thaliana]
158359	ATU020299	ATL8C19478:1..1024	gap2	ATCEA4C51104_1	89	ATL8C19478:354..1003	0.71	g4220454	59	861	3.2e-87	(AC006216) Similar to [Arabidopsis thaliana]
158360	ATU020300	ATL8C21281:2062..306	gap2	ATCEA4S8621	89	ATL8C21281:1888..328	0.66	g2642433	59	1058	1.6e-110	(AC002391) putative receptor protein kinase [Arabidopsis thaliana]
158361	ATU020301	ATL8C14767:1..4383	gap2	ATCEA4S27391, ATCEA4S3937, ATCEA4S11406	89, 87, 83	ATL8C14767:415..3135	0.68	g4773910, g4325348	58, 37	297, 604	2.0e-28, 1.9e-24	(AF147259) No definition line found [Arabidopsis thaliana]; (AF128394) contai

												ns similarity to phosphate transporters [Arabidopsis thaliana]
158362	ATU020302	ATL8C34022:1..904	gap2	ATCEA4C1076_1, ATCEA4C1076_2	89, 84	ATL8C34022:150..899	0.61	g2498732	58	554	5.3e-59	PROBABLE NADP-DEPENDENT OXIDOREDUCTASE P2 [Arabidopsis thaliana]
158363	ATU020303	ATL8C45019:783..1	gap2	ATCEA4C4808_1	89			g3834312	58	1288	1.6e-130	(AC005679) Strong similarity to glycoprotein EP1 gb|L16983 Daucus carota and a member of S

												locus glycoprotein family PF|00954. ESTs gb|AA067487, gb|Z35737, gb|Z30815, gb|Z35350, gb|AA713171, gb|AI100553, gb|Z34248, gb|AA728536, gb|Z30816 an... []
158364	ATU020304	ATL8C6150:3976..7325	gap2	ATCEA4S179, ATCEA4S11082, ATCEA4S3937	89, 87, 84	ATL8C6150:5644..7185	0.89	g2129618, g4773910	56, 37	1646, 190	3.1e-120, 8.6e-05	hypothetical protein 1 - Arabidopsis thaliana retrotransposon Athila [Arabi

												dopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]
158365	ATU020305	ATL8C19851:652..1	gap2	ATCEA4C937_1, ATCEA4C937_2	89, 84	ATL8C19851:634..60	0.78	g2924793	56	393	6.2e-40	(AC002334) similar to synaptobrevin [Arabidopsis thaliana]
158366	ATU020306	ATL8C24286:1..2298	gap2	ATCEA4S14759	89	ATL8C24286:66..1819	0.50	g4914453	56	609	2.3e-50	(AL050398) putative protein [Arabidopsis thaliana]
158367	ATU020307	ATL8C12173:174..3330	gap2	ATCEA4S12209	89	ATL8C12173:174..3313	0.64	g4886286	55	379	1.8e-24	(AL050300) putative protei

												n [Arabidopsis thaliana]
158368	ATU020308	ATL8S4150:1..170	gap2	ATCEA4C9126_1	89			g131332	55	135	1.5e-07	PHOTOSYSTEM II 10 KD PHOSPHOPROTEIN [Oryza sativa]
158369	ATU020309	ATL8C36897:1..948	gap2	ATCEA4S33198	89	ATL8C36897:99..810	0.95	g1653625	54	259	1.7e-08	(D90915) hypothetical protein [Synechocystis sp.]
158370	ATU020310	ATL8C19046:324..1669	gap2	ATCEA4C119918_1	89	ATL8C19046:353..1569	0.95	g3915463	54	101	9.1e-07	HYPOTHETICAL 33.1 KD PROTEIN SLR1592 [Synechocystis sp.]
158371	ATU020311	ATL8C36220:1444..1	gap2	ATCEA4C181921	89	ATL8C36220:1390..3	0.64	g3859594	54	1320	4.9e-119	(AF104919) contai

						6						ns similarity to ribosomal protein L7Ae (Pfam: PF01248, E=0.0017, N=1) [Arabidopsis thaliana]
158372	ATU020312	ATL8C28031:1..843	gap2	ATCEA4C33700_1	89			g3702351	54	368	2.9e-36	(AC005397) putative desiccation protectant protein [Arabidopsis thaliana]
158373	ATU020313	ATL8C29960:1051..1	gap2	ATCEA4S10339	89	ATL8C29960:797..56	0.77	g2388561	53	795	5.9e-69	(AC000098) Similar to Arabidopsis hypothetical

												protein PID:e326839 (gb|Z97337). [Arabidopsis thaliana]
158374	ATU020314	ATL8S4867:601..123	gap2	ATCEA4C25296_1	89	ATL8S4867:444..162	0.57	g2244979	52	496	2.0e-47	(Z97340) similarity to enoyl-CoA hydratase [Arabidopsis thaliana]
158375	ATU020315	ATL8C23910:1..962	gap2	ATCEA4S11082	89	ATL8C23910:60..962	0.55	g4325357	52	928	5.1e-83	(AF128395) contains similarity to Arabidopsis thaliana retrotransposon Athila hypothetical

												protein 1 (GB:X81801) [Arabidopsis thaliana]
158376	ATU020316	ATL8C46482:702..1	gap2	ATCEA4C83616_1	89	ATL8C46482:691..62	0.43	g3242717	52	149	2.4e-17	(AC003040) putative APG protein [Arabidopsis thaliana]
158377	ATU020317	ATL8C16609:1021..29	gap2	ATCEA4C5510_2, ATCEA4C5510_1	89, 85	ATL8C16609:1021..89	1.00	g2960216	50	691	3.6e-73	(AJ223384) 26S proteasome regulatory ATPase subunit 10b (S10b) [Manduca sexta]
158378	ATU020318	ATL8C28674:1031..1655	gap2	ATCEA4C129117_1, ATCEA4S29040	89, 84			g4115916	51	200	1.3e-15	(AF118222) F3H7.9 gene product [Arabidopsis

												thaliana]
158379	ATU020319	ATL8C31663:682..1	gap2	ATCEA4S4404	89	ATL8C31663:549..47	0.92	g4678210	50	204	1.9e-11	(AC007134) hypothetical protein [Arabidopsis thaliana]
158380	ATU020320	ATL8C2636:140..1236	gap2	ATCEA4C1711_1	89	ATL8C2636:160..1013	0.56	g3413425	50	712	8.9e-54	(AJ006309) protein tyrosine phosphatase [Arabidopsis thaliana]
158381	ATU020321	ATL8C24317:1..1465	gap2	ATCEA4S17874	89	ATL8C24317:47..1311	0.65	g3879758	49	364	1.8e-34	(Z802220) Similarity to yeast protein TREMBLID E246895); cDNA EST EMBL:T00018

												comes from this gene; cDNA EST EMBL:C13908 comes from this gene; cDNA EST EMBL:C11656 comes from this gene; cDNA EST yk234a5.3 comes from this gene;... []
158382	ATU020322	ATL8S26474:134..663	gap2	ATCEA4S553	89			g4586037	49	606		(AC007109) putative heat shock protein [Arabidopsis thalia

												na]
158383	ATU020323	ATL8C32862:1873..648	gap2	ATCEA4S27088, ATCEA4C5442_1	89, 85	ATL8C32862:1488..903	0.81	g4508075	48	692	3.2e-54	(AC005882) 50259 [Arabidopsis thaliana]
158384	ATU020324	ATL8C3244:1..1997	gap2	ATCEA4S321	89	ATL8C3244:153..1501	0.77	g4432802	48	1546	5.6e-134	(AC006437) putative polpolyprotein, 5' partial [Arabidopsis thaliana]
158385	ATU020325	ATL8C18829:1..812	gap2	ATCEA4C818_1	89	ATL8C18829:214..743	0.46	g1352316	47	103	0.0058	DR1 PROTEIN HOMOLOG [Arabidopsis thaliana]
158386	ATU020326	ATL8C568:996..380	gap2	ATCEA4S30961	89	ATL8C568:926..380	0.77	g2129636	46	796	6.0e-82	lipase - Arabidopsis thaliana [Arabidopsis thaliana]

158387	ATU020327	ATL8C440:1..700	gap2	ATCEA4S28547	89	ATL8C440:133..697	0.72	g3164136	46	751	1.4e-63	(D78603) cytochrome P450 monooxygenase [Arabidopsis thaliana]
158388	ATU020328	ATL8C14078:1317..2531	gap2	ATCEA4S36266	89	ATL8C14078:1317..2531	0.59	g1212759	46	338	6.4e-29	(X89192) DNA binding protein [Arabidopsis thaliana]
158389	ATU020329	ATL8C3194:604..1684	gap2	ATCEA4S31964	89			g2281087	46	257	1.8e-11	(AC002333) STE11 protein kinase isolog [Arabidopsis thaliana]
158390	ATU020330	ATL8C19756:1162..1	gap2	ATCEA4C674_1	89	ATL8C19756:1162..66	0.95	g3775995	45	715	1.2e-73	(AJ010461) RNA helicase [Arabidopsis

												thaliana]
158391	ATU020331	ATL8C20344:1..1137	gap2	ATCEA4S2558	89	ATL8C20344:171..418	0.83	g4006880	45	782	1.9e-60	(Z99707) putative protein [Arabidopsis thaliana]
158392	ATU020332	ATL8C27558:939..1	gap2	ATCEA4S11513, ATCEA4C942_1, ATCEA4S32263	89, 86, 85	ATL8C27558:433..125	0.81	g1168529	45	390		SERINE/THREONINE-PROTEIN KINASE ASK1 [Arabidopsis thaliana]
158393	ATU020333	ATL8C7635:1..1887	gap2	ATCEA4C34644_1	89	ATL8C7635:104..919	0.57	g3776557	45	500	4.9e-49	(AC005388) Contains similarity to [Arabidopsis thaliana]
158394	ATU020334	ATL8C17276:1..868	gap2	ATCEA4S32103	89	ATL8C17276:246..726	0.54	g2244965	45	185	1.1e-15	(Z97340) unnamed protein

												product [Arabidopsis thaliana]
158395	ATU020335	ATL8C32277:1..1145	gap2	ATCEA4S14997, ATCEA4C7395_1	89, 86	ATL8C32277:199..860	0.64	g3047096	44	1703	5.3e-177	(AF058826) similar to eukaryotic protein kinase domains (Pfam: pkinase.hmm, score: 189.74) [Arabidopsis thaliana]
158396	ATU020336	ATL8C18032:1..1768	gap2	ATCEA4C90719_1	89			g2245120	43	2250	3.0e-238	(Z97343) hypothetical protein [Arabidopsis thaliana]
158397	ATU020337	ATL8C22805:1..1459	gap2	ATCEA4C2106_1	89			g1871182	43	1690	1.0e-167	(U90439) phosph

												olipase D isolog [Arabidopsis thaliana]
158398	ATU020338	ATL8C109:1268..450	gap2	ATCEA4S33165, ATCEA4S31386	89, 83			g3695379	43	780		(AF096370) contains similarity to a C. elegans hypothetical protein F44G4.1 (GB:Z49910) and several yeast hypothetical proteins such as 35.1 KD protein in NAM8-

												GAR1 intergenic region (SP:P38805) [Arabidopsis thaliana]
158399	ATU0020339	ATL8C46564:2520..711	gap2	ATCEA4S178, ATCEA4S253	89, 86			g4773910	43	206	4.6e-14	(AF147259) No definition line found [Arabidopsis thaliana]
158400	ATU0020340	ATL8C2719:2797..2138	gap2	ATCEA4C30272_1	89			g3402723	43	363	1.2e-85	(AC004261) hypothetical protein, 5' partial [Arabidopsis thaliana]
158401	ATU0020341	ATL8C4652:1..1915	gap2	ATCEA4S2374	89	ATL8C4652:258..1783	0.84	g3236261	42	397	8.1e-37	(AC004684) putative zinc finger protei

												n [Arabidopsis thaliana]
158402	ATU020342	ATL8C29981:4243..2869	gap2	ATCEA4S13921	89	ATL8C29981:3477..3281	0.65	g2244888	42	374	4.2e-27	(Z97338) similarity to cytochrome P450 [Arabidopsis thaliana]
158403	ATU020343	ATL8C24843:1..865	gap2	ATCEA4S1393	89	ATL8C24843:304..633	0.79	g2499610	41	604	3.7e-62	MITOGEN-ACTIVATED PROTEIN KINASE HOMOLOG 6 (MAP KINASE 6) (ATMPK6) [Arabidopsis thaliana]
158404	ATU020344	ATL8C46125:1495..7978	gap2	ATCEA4S178	89			g4263831	41	2207	6.8e-217	(AC006067) putative revers

												e transcriptase [Arabidopsis thaliana]
158405	ATU020345	ATL8C13561:190..2045	gap2	ATCEA4S3937	89	ATL8C13561:501..2045	0.62	g4773910	40	299	2.5e-28	(AF147259) No definition line found [Arabidopsis thaliana]
158406	ATU020346	ATL8C26268:1870..191	gap2	ATCEA4C133571_1	89	ATL8C26268:1689..191	0.57	g2462740	40	187	2.4e-08	(AC002292) Hypothetical protein [Arabidopsis thaliana]
158407	ATU020347	ATL8C37451:1..2344	gap2	ATCEA4C8777_1	89			g2129673	40	1511		potassium channel protein AKT1 - Arabidopsis thaliana

												[Arabidopsis thaliana]
158408	ATU020348	ATL8C17342:800..1360	gap2	ATCEA4S1842	89			g2809244	40	451	9.8e-48	(AC002560) F21B7.13 [Arabidopsis thaliana]
158409	ATU020349	ATL8C44870:1498..1	gap2	ATCEA4S26758	89	ATL8C44870:1427..535	0.90	g2462745	39	446	9.5e-42	(AC002292) Hypothetical protein [Arabidopsis thaliana]
158410	ATU020350	ATL8C48901:383..1286	gap2	ATCEA4C3664_1	89	ATL8C48901:430..1246	0.85	g4467128	39	768	6.5e-71	(AL035538) putative protein [Arabidopsis thaliana]
158411	ATU020351	ATL8C20031:2053..1255	gap2	ATCEA4S26323	89	ATL8C20031:1979..1416	0.67	g1184953	39	698		(U46574) protein farnesyl transferase

												beta subunit [Arabidopsis thaliana]
158412	ATU020352	ATL8C33728:778..1	gap2	ATCEA4C18463_1	89	ATL8C33728:742..53	0.57	g3033386	39	237	1.4e-20	(AC004238) RING3-like protein [Arabidopsis thaliana]
158413	ATU020353	ATL8S3638:1..416	gap2	ATCEA4S10857	89	ATL8S3638:50..326	0.92	g3047080	38	285	1.9e-17	(AF058914) contains similarity to Arabidopsis thaliana DNA-damage-repair/tolerance resistance protein DRT111 (SW:P4

												2698) [Arabidopsis thaliana]
158414	ATU020354	ATL8C24586:1..1439	gap2	ATCEA4C58298_1	89	ATL8C24586:54..1081	0.84	g1491710	38	97	0.18	(X96506) alpha subunit; forms heterodimer with NC2 alpha/Dr1 [Homo sapiens]
158415	ATU020355	ATL8C11971:1..483	gap2	ATCEA4C72125_1	89	ATL8C11971:68..374	0.81	g3337357	38	295	2.3e-09	(AC004481) hypothetical protein [Arabidopsis thaliana]
158416	ATU020356	ATL8C18077:1377..235	gap2	ATCEA4S35089	89	ATL8C18077:1287..354	0.95	g4586401	37	218	8.2e-14	(D88208) hSgt1p [Homo sapiens]
158417	ATU020357	ATL8C34839:2758..1358	gap2	ATCEA4C1985_1	89	ATL8C34839:2644..1486	0.84	g3152589	37	939	2.4e-87	(AC002986) Strong simila

												rity to lupeol synthase gb|U49919 from A. thaliana (second gene in a series of three with similar homologies). [Arabidopsis thaliana]
158418	ATU020358	ATL8C3 3142:659..100	gap2	ATCEA4 S30881	89	ATL8C3 3142:589..100	0.82	g3004548	37	659	1.7e-59	(AC003673) unknown protein [Arabidopsis thaliana]
158419	ATU020359	ATL8C2 1087:1499..443	gap2	ATCEA4 S3764	89	ATL8C2 1087:1448..443	0.73	g1407705	37	1190	2.7e-117	(U60202) lipoxygenase

												[Solanum tuberosum]
158420	ATU020360	ATL8C21873:327..1571	gap2	ATCEA4S27716	89	ATL8C21873:396..1571	0.45	g2827651	36	454	4.8e-46	(AL021637) putative protein [Arabidopsis thaliana]
158421	ATU020361	ATL8S15638:1..554	gap2	ATCEA4C6483_1	89			g4678309	36	233	2.9e-23	(AL049655) small GTP-binding protein-like (fragment) [Arabidopsis thaliana]
158422	ATU020362	ATL8S1802:629..1	gap2	ATCEA4C26442_1	89			g2832624	36	365	9.7e-36	(AL021711) floral homeotic protein agamous [Arabidopsis thalia

												na]
158423	ATU020363	ATL8C37911:490..996	gap2	ATCEA4S31340	89			g4314391	36	298	1.0e-15	(AC006232) unknown protein [Arabidopsis thaliana]
158424	ATU020364	ATL8C9263:1..1598	gap2	ATCEA4S35963	89			g3269285	36	294		(AL030978) hypothetical protein [Arabidopsis thaliana]
158425	ATU020365	ATL8C7938:1..1359	gap2	ATCEA4C101564_1	89			g4056489	36	883	1.5e-82	(AC005896) putative white protein [Arabidopsis thaliana]
158426	ATU020366	ATL8C34349:249..1	gap2	ATCEA4C25432_1	89			g3063467	35	188	4.0e-12	(AC003981) F22O13.29 [Arabidopsis thaliana]

158427	ATU020367	ATL8C47604:2545..1020	gap2	ATCEA4S35479, ATCEA4C128252_1	89, 82			g2829867	35	1137	7.0e-108	(AC002396) Hypothetical protein [Arabidopsis thaliana]
158428	ATU020368	ATL8C2288:709..1692	gap2	ATCEA4S27399	89			g4567294	35	1064	3.6e-88	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
158429	ATU020369	ATL8C6853:829..1	gap2	ATCEA4S36238	89	ATL8C6853:547..9	0.50	g1171995	34	859	8.1e-80	PHENYLALANINE AMMONIA-LYASE 3 [Arabidopsis thaliana]
158430	ATU020370	ATL8C45919:164..1165	gap2	ATCEA4C32406_1	89	ATL8C45919:414..1132	0.69	g4467095	33	153	8.4e-11	(AL035538) putative protei

												n [Arabidopsis thaliana]
158431	ATU020371	ATL8C10318:1..1338	gap2	ATCEA4C54169_1	89	ATL8C10318:49..1338	0.67	g4914329	33	370		(AC005489) F14N23.15 [Arabidopsis thaliana]
158432	ATU020372	ATL8C31712:1..1021	gap2	ATCEA4S4765	89	ATL8C31712:382..781	0.45	g629722	33	647	2.2e-59	finger protein pcp1 - potato [Solanum tuberosum]
158433	ATU020373	ATL8C14849:1..906	gap2	ATCEA4S31644	89			g3080426	33	385	1.5e-41	(AL022604) putative protein [Arabidopsis thaliana]
158434	ATU020374	ATL8C36286:3381..4945	gap2	ATCEA4S34943	89	ATL8C36286:3943..4899	0.50	g2961373	32	1169	3.2e-129	(AL022141) putative disease resistance

												protein [Arabidopsis thaliana]
158435	ATU0203 75	ATL8C7706:1..2890	gap2	ATCEA4S178	89	ATL8C7706:491..2890	0.44	g4038062	32	436	2.8e-32	(AC005897) putative transposon MuDR [Arabidopsis thaliana]
158436	ATU0203 76	ATL8C25220:754..1228	gap2	ATCEA4S5631	89			g2244755	32	682	1.1e-60	(Z97335) hypothetical protein [Arabidopsis thaliana]
158437	ATU0203 77	ATL8C29988:1261..1	gap2	ATCEA4C65499_1, ATCEA4S13716	89, 84			g3142294	32	640	2.2e-47	(AC002411) Strong similarity to initiation factor eIF-2, gb|U37354 from

												S. pombe. ESTs gb|T41979, gb|N37284 and gb|N37529 come from this gene. [Arabidopsis thaliana]
158438	ATU020378	ATL8C21938:1..549	gap2	ATCEA4C30878_2, ATCEA4C30878_1	89, 87			g2213591	32	605	1.0e-08	(AC000348) T7N9.11 [Arabidopsis thaliana]
158439	ATU020379	ATL8C12294:1468..1	gap2	ATCEA4S32990, ATCEA4S35488	89, 87	ATL8C12294:1026..219	0.49	g534982	31	236	6.7e-17	(X75898) phosphoglucomutase [Spinacia oleracea]
158440	ATU020380	ATL8C17686:359..1	gap2	ATCEA4S35974, ATCEA4S30003	89, 85			g2809260	31	260	1.7e-11	(AC002560) F21B7.29 [Arabi

												dopsis thaliana]
158441	ATU020381	ATL8C5909:1876..2304	gap2	ATCEA4C18551_1	89			g4325375	31	239		(AF128396) similar to arginases (Pfam: PF00491, Score=353.2, E=1.4e-119, N=1) [Arabidopsis thaliana]
158442	ATU020382	ATL8C19979:1328..1	gap2	ATCEA4C30305_1	89			g3355490	31	421	8.2e-26	(AC004218) putative dolichyl-phosphate beta-glucosyltransferase [Arabidopsis thaliana]
158443	ATU020383	ATL8C3145:1.	gap2	ATCEA4S13901	89	ATL8C3145:63	0.70, 0.44	g4115359	30	786	3.6e-59	(AC005957)

		.11963				4..4925, ATL8C3145:6033..11963						putative disease resistance protein [Arabidopsis thaliana]
158444	ATU020384	ATL8C22319:1..4190	gap2	ATCEA4S13901	89	ATL8C22319:110..4190	0.43	g3805769	30	370	4.8e-19	(AC005693) putative mudR-like transposon [Arabidopsis thaliana]
158445	ATU020385	ATL8C29891:1..1076	gap2	ATCEA4S2398	89			g3236250	30	146	3.1e-10	(AC004684) hypothetical protein [Arabidopsis thaliana]
158446	ATU020386	ATL8C46558:73..1019	gap2	ATCEA4C7404_1	89	ATL8C46558:336..1019	1.00					
158447	ATU020387	ATL8C20667:1	gap2	ATCEA4C14829	89	ATL8C20667:4	1.00					

		..585		_1		75..558						
158448	ATU020388	ATL8S19126:1..344	gap2	ATCEA4S30399	89	ATL8S19126:11..344	0.99					
158449	ATU020389	ATL8S5691:1..587	gap2	ATCEA4C24136_1	89	ATL8S5691:85..178	0.99					
158450	ATU020390	ATL8C38681:85..696	gap2	ATCEA4S927	89	ATL8C38681:356..696	0.99					
158451	ATU020391	ATL8S1555:168..496	gap2	ATCEA4S11350	89	ATL8S1555:183..281	0.99					
158452	ATU020392	ATL8S11154:490..1	gap2	ATCEA4C469_1	89	ATL8S11154:164..14	0.98					
158453	ATU020393	ATL8C31105:907..1728	gap2	ATCEA4S30812	89	ATL8C31105:991..1707	0.98					
158454	ATU020394	ATL8C37030:257..1077	gap2	ATCEA4C4032_1	89	ATL8C37030:384..715	0.98					
158455	ATU020395	ATL8C5803:308..1146	gap2	ATCEA4C17111_3, ATCEA4C17111_1, ATCEA4S29730	89, 88, 85	ATL8C5803:308..1146	0.97					
158456	ATU020396	ATL8S658:29..189	gap2	ATCEA4S253	89	ATL8S658:120..189	0.97					
158457	ATU020397	ATL8C42673:344..60	gap2	ATCEA4S12122	89	ATL8C42673:400..59	0.97					

		8				5						
158458	ATU020398	ATL8C43783:1..217	gap2	ATCEA4S15281	89	ATL8C43783:61..139	0.97					
158459	ATU020399	ATL8C32504:1813..1128	gap2	ATCEA4C28960_1	89	ATL8C32504:1650..1128	0.97					
158460	ATU020400	ATL8C29900:1..279	gap2	ATCEA4C141712_1	89	ATL8C29900:85..279	0.96					
158461	ATU020401	ATL8S28502:1..319	gap2	ATCEA4C6189_1	89	ATL8S28502:81..266	0.96					
158462	ATU020402	ATL8C48089:222..1390	gap2	ATCEA4C74591_1	89	ATL8C48089:222..1196	0.95					
158463	ATU020403	ATL8C11702:144..625	gap2	ATCEA4S32953	89	ATL8C11702:290..563	0.95					
158464	ATU020404	ATL8S9278:1..358	gap2	ATCEA4S2340	89	ATL8S9278:52..279	0.95					
158465	ATU020405	ATL8C33757:365..423	gap2	ATCEA4C49877_1	89	ATL8C33757:420..365	0.95					
158466	ATU020406	ATL8S25663:1..698	gap2	ATCEA4C6624_1	89	ATL8S25663:21..698	0.95					
158467	ATU020407	ATL8S8918:34..586	gap2	ATCEA4C186015	89	ATL8S8918:34..455	0.95					
158468	ATU020408	ATL8C14208:391..1140	gap2	ATCEA4C139889_1	89	ATL8C14208:391..1140	0.94					

158469	ATU020409	ATL8C1924:142..602	gap2	ATCEA4C30375_1	89	ATL8C1924:142..489	0.94					
158470	ATU020410	ATL8C840:2882..1137	gap2	ATCEA4S10705, ATCEA4C151445_1	88, 82	ATL8C840:2824..1148	0.93	g3859593	100	1625	3.2e-143	(AF104919) No definition line found [Arabidopsis thaliana]
158471	ATU020411	ATL8C32668:1805..668	gap2	ATCEA4C32874_1	89	ATL8C32668:1805..924	0.93					
158472	ATU020412	ATL8C6111:498..1	gap2	ATCEA4C563_1	89	ATL8C6111:445..20	0.92					
158473	ATU020413	ATL8C43947:164..3292	gap2	ATCEA4C32720_1	89	ATL8C43947:164..3292	0.92					
158474	ATU020414	ATL8C651:81..874	gap2	ATCEA4S3937	89	ATL8C651:81..743	0.92					
158475	ATU020415	ATL8C11288:1648..25	gap2	ATCEA4C11328_1	89	ATL8C11288:637..52	0.92					
158476	ATU020416	ATL8C17016:3451..2162	gap2	ATCEA4S32422, ATCEA4S10177	89, 82	ATL8C17016:3376..2162	0.92					
158477	ATU020417	ATL8C8180:753..325	gap2	ATCEA4S9374	89	ATL8C8180:753..325	0.91					

158478	ATU020418	ATL8C3702:2026..1	gap2	ATCEA4S20238, ATCEA4S26775	88, 83	ATL8C3702:1918..89	0.91	g461812	100	1225	2.2e-130	CYTOCHROME P450 72 (CYPLXXII) (PROBABLE GERANIOL-10-HYDROXYLASE) (GE10H) [Catharanthus roseus]
158479	ATU020419	ATL8C16952:1102..779	gap2	ATCEA4S26658, ATCEA4C149769_1	89, 83	ATL8C16952:895..779	0.91					
158480	ATU020420	ATL8S18015:1..555	gap2	ATCEA4C46839_1	89	ATL8S18015:244..555	0.91					
158481	ATU020421	ATL8C25912:42..997	gap2	ATCEA4S31006, ATCEA4S26952	89, 87	ATL8C25912:42..997	0.91					
158482	ATU020422	ATL8C37241:95..1573	gap2	ATCEA4S12252	89	ATL8C37241:95..1349	0.91					
158483	ATU020423	ATL8C8494:1.	gap2	ATCEA4C32076	89	ATL8C8494:59	0.91					

		.255		1		..202						
158484	ATU020424	ATL8C29705:1167..481	gap2	ATCEA4S28089	89	ATL8C29705:1033..481	0.90					
158485	ATU020425	ATL8C35756:2123..1	gap2	ATCEA4S24791,ATCEA4S2673	89, 85	ATL8C35756:2048..227	0.90					
158486	ATU020426	ATL8C15573:578..68	gap2	ATCEA4S614	89	ATL8C15573:436..68	0.89					
158487	ATU020427	ATL8C5384:245..607	gap2	ATCEA4C60835_1	89	ATL8C5384:304..534	0.88					
158488	ATU020428	ATL8C8901:1446..822	gap2	ATCEA4C26286_1	89	ATL8C8901:1437..869	0.88					
158489	ATU020429	ATL8C23647:1989..877	gap2	ATCEA4S1739	89	ATL8C23647:1786..877	0.88					
158490	ATU020430	ATL8C35703:36..3806	gap2	ATCEA4S34861	89	ATL8C35703:36..3806	0.88					
158491	ATU020431	ATL8C3602:574..1	gap2	ATCEA4S31825	89	ATL8C3602:574..23	0.88					
158492	ATU020432	ATL8S1079:484..46	gap2	ATCEA4S27399	89	ATL8S1079:323..46	0.87					
158493	ATU020433	ATL8C20031:333..942	gap2	ATCEA4S25241	89	ATL8C20031:333..941	0.87					
158494	ATU020434	ATL8C18585:2	gap2	ATCEA4S11673	89	ATL8C18585:2	0.87					

		209..1				209..44						
158495	ATU020435	ATL8C41025:926..150	gap2	ATCEA4S2760	89	ATL8C41025:607..150	0.87					
158496	ATU020436	ATL8C16029:212..987	gap2	ATCEA4C7625_2	89	ATL8C16029:212..649	0.87					
158497	ATU020437	ATL8C17060:1528..3144	gap2	ATCEA4C5591_2, ATCEA4C5591_1	89, 84	ATL8C17060:2052..3128	0.86					
158498	ATU020438	ATL8S17115:215..32	gap2	ATCEA4C66323_1	89	ATL8S17115:142..32	0.86					
158499	ATU020439	ATL8C31545:403..1246	gap2	ATCEA4C51291_1	89	ATL8C31545:406..1115	0.86					
158500	ATU020440	ATL8C37464:1289..831	gap2	ATCEA4S26139, ATCEA4S15547	89, 85	ATL8C37464:1289..1002	0.86					
158501	ATU020441	ATL8C35368:1..925	gap2	ATCEA4C143696_1	89	ATL8C35368:283..925	0.86					
158502	ATU020442	ATL8S2746:432..20	gap2	ATCEA4S29559	89	ATL8S2746:344..20	0.86					
158503	ATU020443	ATL8C3735:3259..2376	gap2	ATCEA4C8984_1	89	ATL8C3735:3219..2394	0.85					
158504	ATU020	ATL8C3	gap2	ATCEA4	89	ATL8C3	0.85					

	444	0659:6237..745		S12478		0659:6237..745						
158505	ATU020445	ATL8S29934:360..27	gap2	ATCEA4S33094, ATCEA4S33948	89, 83	ATL8S29934:355..156	0.85					
158506	ATU020446	ATL8C33245:1544..151	gap2	ATCEA4S8372	89	ATL8C33245:1544..151	0.84					
158507	ATU020447	ATL8C4347:23..538	gap2	ATCEA4S2289	89	ATL8C4347:23..536	0.84					
158508	ATU020448	ATL8C45739:1920..952	gap2	ATCEA4S178, ATCEA4S253	89, 87	ATL8C45739:1920..952	0.84					
158509	ATU020449	ATL8C40147:826..101	gap2	ATCEA4C373_1	89	ATL8C40147:738..108	0.84					
158510	ATU020450	ATL8C23336:941..130	gap2	ATCEA4C158493_1	89	ATL8C23336:941..130	0.83					
158511	ATU020451	ATL8C17215:918..75	gap2	ATCEA4S35894	89	ATL8C17215:784..75	0.83					
158512	ATU020452	ATL8S5124:86..545	gap2	ATCEA4C29575_1	89	ATL8S5124:273..434	0.83					
158513	ATU020453	ATL8S22475:605..281	gap2	ATCEA4C120154_2	89	ATL8S22475:599..499	0.83					
158514	ATU020454	ATL8C46940:816..45	gap2	ATCEA4S33018,	89, 87, 86	ATL8C46940:773..56	0.83					

		8		ATCEA4S26102, ATCEA4C6649_1		1						
158515	ATU020455	ATL8C2677:995..1	gap2	ATCEA4C35340_1	89	ATL8C2677:995..399	0.82					
158516	ATU020456	ATL8C45085:1..845	gap2	ATCEA4C119392_1, ATCEA4S33828, ATCEA4S32634	89, 86, 86	ATL8C45085:94..550	0.81					
158517	ATU020457	ATL8C37474:895..169	gap2	ATCEA4C22825_1	89	ATL8C37474:826..169	0.81					
158518	ATU020458	ATL8S24386:578..1	gap2	ATCEA4S31428	89	ATL8S24386:443..147	0.81					
158519	ATU020459	ATL8S1229:281..558	gap2	ATCEA4S253	89	ATL8S1229:362..558	0.81					
158520	ATU020460	ATL8C17817:5616..1	gap2	ATCEA4S11300, ATCEA4S11810, ATCEA4S11825, ATCEA4S13699	89, 88, 87, 86	ATL8C17817:5616..74	0.80					
158521	ATU020	ATL8C3	gap2	ATCEA4	88, 86	ATL8C3	0.80	g32876	100	1270	1.2e-	(AC003

	461	92:138..1777		C16455_1, ATCEA4S31923		92:1324..1777		88			117	979) Contains similarity to ycf37 gene product gb|1001425 from Synechocystis sp. genome gb|D63999. ESTs gb|T43026, gb|R64902, gb|Z18169 and gb|N37374 come from this gene. [Arabidopsis thaliana]
158522	ATU020462	ATL8C2 2505:3229..1	gap2	ATCEA4C116947_1	89	ATL8C2 2505:2980..1	0.80					

		868				868						
158523	ATU020463	ATL8C2681:4340..101	gap2	ATCEA4S2593	89	ATL8C2681:4340..101	0.80					
158524	ATU020464	ATL8C29728:8..1018	gap2	ATCEA4S30343	89	ATL8C29728:1018..8	0.79					
158525	ATU020465	ATL8C22842:326..2161	gap2	ATCEA4C18817_1	89	ATL8C22842:501..2161	0.79					
158526	ATU020466	ATL8C32802:1..1487	gap2	ATCEA4C527_1	89	ATL8C32802:271..1205	0.78					
158527	ATU020467	ATL8C49073:478..55	gap2	ATCEA4S16825	89	ATL8C49073:136..62	0.78					
158528	ATU020468	ATL8C9238:207..1	gap2	ATCEA4C88976_1	89	ATL8C9238:183..130	0.77					
158529	ATU020469	ATL8C48881:68..1036	gap2	ATCEA4C27066_1, ATCEA4S289	89, 85	ATL8C48881:249..937	0.77					
158530	ATU020470	ATL8C7094:717..55	gap2	ATCEA4S1221	89	ATL8C7094:580..55	0.77					
158531	ATU020471	ATL8C212:1..569	gap2	ATCEA4C17218_2	89	ATL8C212:47..397	0.77					
158532	ATU020472	ATL8C32162:2694..357	gap2	ATCEA4S28308, ATCEA4S18451, ATCEA4	88, 87, 82	ATL8C32162:2655..357	0.77	g2058456	100	1671	2.6e-168	(U66408) GTP-binding protein

				S34528								[Arabidopsis thaliana]
158533	ATU020473	ATL8C3901:3909..206	gap2	ATCEA4S32677	89	ATL8C3901:3909..206	0.76					
158534	ATU020474	ATL8C2399:1161..663	gap2	ATCEA4S1615, ATCEA4S6023	89, 88	ATL8C2399:853..663	0.75					
158535	ATU020475	ATL8S20835:500..77	gap2	ATCEA4C8409_1	89	ATL8S20835:333..77	0.73					
158536	ATU020476	ATL8C38010:922..1	gap2	ATCEA4S34968	89	ATL8C38010:922..203	0.73					
158537	ATU020477	ATL8C25252:308..1300	gap2	ATCEA4S1209, ATCEA4S26242	89, 88	ATL8C25252:308..1077	0.73					
158538	ATU020478	ATL8C36323:84..1355	gap2	ATCEA4C51489_1	89	ATL8C36323:84..1096	0.73					
158539	ATU020479	ATL8C39583:5317..5813	gap2	ATCEA4S1374	89	ATL8C39583:5379..5804	0.73					
158540	ATU020480	ATL8C41841:2690..1	gap2	ATCEA4C1869_1	88	ATL8C41841:2168..301	0.72	g3367582	100	1211	1.7e-119	(AL031135) putative protein [Arabidopsis thalia

												na]
158541	ATU020481	ATL8C14816:10196..4931	gap2	ATCEA4S11082	88	ATL8C14816:9615..4931	0.72	g4773919	100	2676	1.1e-210	(AF147259) No definition line found [Arabidopsis thaliana]
158542	ATU020482	ATL8C39928:5106..786	gap2	ATCEA4S178	88	ATL8C39928:5106..2966	0.72	g4038066, g99755	100, 71	742, 1052	4.1e-29, 8.6e-120	(AC005897) hypothetical protein [Arabidopsis thaliana]; RNA-directed DNA polymerase (EC 2.7.7.49) - Arabidopsis thaliana retrotransposon Ta1-1 (fragment)

												[Arabidopsis thaliana]
158543	ATU020483	ATL8C4816:1149..170	gap2	ATCEA4S29818	89	ATL8C4816:1149..170	0.71					
158544	ATU020484	ATL8C44518:1..894	gap2	ATCEA4C6345_1	89	ATL8C44518:261..877	0.71					
158545	ATU020485	ATL8C20474:554..1	gap2	ATCEA4S1905	89	ATL8C20474:554..193	0.71					
158546	ATU020486	ATL8C17937:1225..680	gap2	ATCEA4S4810	89	ATL8C17937:1201..680	0.71					
158547	ATU020487	ATL8C18954:1..1476	gap2	ATCEA4C12067_1	89	ATL8C18954:146..1158	0.70					
158548	ATU020488	ATL8C23955:129..1485	gap2	ATCEA4S12521, ATCEA4S14670	88, 86	ATL8C23955:153..1485	0.70	g4544385	100	805	2.2e-99	(AC007047) hypothetical protein [Arabidopsis thaliana]
158549	ATU020489	ATL8C13379:62..670	gap2	ATCEA4C33481_1	89	ATL8C13379:189..302	0.70					
158550	ATU020490	ATL8S17838:6	gap2	ATCEA4C29279	89	ATL8S17838:5	0.70					

		92..243		_1		59..243						
158551	ATU020491	ATL8C9688:3713..1710	gap2	ATCEA4S32055	89	ATL8C9688:3713..1710	0.70					
158552	ATU020492	ATL8C49430:1..953	gap2	ATCEA4S10889	89	ATL8C49430:420..953	0.70					
158553	ATU020493	ATL8C6099:241..1042	gap2	ATCEA4C33329_1	89	ATL8C6099:345..1042	0.70					
158554	ATU020494	ATL8C21334:1..1172	gap2	ATCEA4C87019_1, ATCEA4C30042_1	89, 85	ATL8C21334:41..920	0.70					
158555	ATU020495	ATL8C42380:456..279	gap2	ATCEA4S253	89	ATL8C42380:366..279	0.68					
158556	ATU020496	ATL8C14852:1..934	gap2	ATCEA4C6694_1	89	ATL8C14852:17..934	0.68					
158557	ATU020497	ATL8C3987:134..855	gap2	ATCEA4S2094	89	ATL8C3987:156..855	0.68					
158558	ATU020498	ATL8C18850:744..300	gap2	ATCEA4C38551_1	89	ATL8C18850:725..300	0.67					
158559	ATU020499	ATL8S30478:83..453	gap2	ATCEA4C824_1	89	ATL8S30478:88..402	0.67					
158560	ATU020500	ATL8C43021:1179..9	gap2	ATCEA4S809	89	ATL8C43021:1179..9	0.67					

		1				1						
158561	ATU020501	ATL8C4812:58..1482	gap2	ATCEA4S11342	89	ATL8C4812:58..1355	0.67					
158562	ATU020502	ATL8C41668:829..177	gap2	ATCEA4S23793	89	ATL8C41668:688..301	0.66					
158563	ATU020503	ATL8C14853:1..554	gap2	ATCEA4C48992_1	89	ATL8C14853:104..195	0.66					
158564	ATU020504	ATL8C47591:386..1117	gap2	ATCEA4C9171_1, ATCEA4C9171_2	89, 83	ATL8C47591:442..890	0.66					
158565	ATU020505	ATL8C45822:1873..179	gap2	ATCEA4S34850	89	ATL8C45822:1873..179	0.65					
158566	ATU020506	ATL8C9776:1..1220	gap2	ATCEA4C24651_2, ATCEA4C5599_1	89, 83	ATL8C9776:90..1000	0.65					
158567	ATU020507	ATL8C12832:869..1	gap2	ATCEA4C866_2	89	ATL8C12832:390..59	0.65					
158568	ATU020508	ATL8C29428:427..50	gap2	ATCEA4S2710	89	ATL8C29428:292..50	0.64					
158569	ATU020509	ATL8S22486:351..57	gap2	ATCEA4S30865	89	ATL8S22486:341..57	0.64					
158570	ATU020510	ATL8S1976:1..469	gap2	ATCEA4C4743_1	89	ATL8S1976:25..302	0.63					

158571	ATU020511	ATL8C31736:77..1970	gap2	ATCEA4C42942_1	89	ATL8C31736:77..1970	0.63					
158572	ATU020512	ATL8C5414:160..1750	gap2	ATCEA4S34411	89	ATL8C5414:160..1750	0.63					
158573	ATU020513	ATL8C24494:835..42	gap2	ATCEA4S8367	89	ATL8C24494:835..42	0.63					
158574	ATU020514	ATL8C2237:1978..2950	gap2	ATCEA4C7163_1	89	ATL8C2237:2015..2950	0.62					
158575	ATU020515	ATL8C34679:507..764	gap2	ATCEA4C28868_1	89	ATL8C34679:552..611	0.62					
158576	ATU020516	ATL8C31117:409..759	gap2	ATCEA4S4331	89	ATL8C31117:759..409	0.62					
158577	ATU020517	ATL8C14749:824..6677	gap2	ATCEA4S12925, ATCEA4S13006, ATCEA4S13054	89, 86, 86	ATL8C14749:824..6677	0.62					
158578	ATU020518	ATL8S3890:451..714	gap2	ATCEA4C70633_1	89	ATL8S3890:680..477	0.61					
158579	ATU020519	ATL8C6020:344..760	gap2	ATCEA4S26637	89	ATL8C6020:344..477	0.61					
158580	ATU020520	ATL8C48059:1219..7	gap2	ATCEA4C24492_1,	88, 84	ATL8C48059:1219..7	0.61	g2462739	100	1257	2.1e-104	(AC002292) Hypoth

		1		ATCEA4 S16589		4						etical protein [Arabidopsis thaliana]
158581	ATU020 521	ATL8C9 221:1. .4556	gap2	ATCEA4 S27393	88	ATL8C9 221:23 9..438 0	0.60	g33778 30, g43888 25	100, 30	2320, 453		(AF075 598) contains similarity to Aplysia californica intermediate filament protein A (GB:X60 297) [Arabidopsis thaliana]; (AC006 528) putative pol polyprotein with reverse transc

												riptase domain (Pfam: PF00078) [Arabidopsis thaliana]
158582	ATU0020522	ATL8C38008:599..51	gap2	ATCEA4S31939	89	ATL8C38008:599..51	0.60					
158583	ATU0020523	ATL8S27583:1..347	gap2	ATCEA4C34107_1	89	ATL8S27583:175..12	0.59					
158584	ATU0020524	ATL8C40005:249..15	gap2	ATCEA4C42505_1	89	ATL8C40005:245..15	0.58					
158585	ATU0020525	ATL8C49709:604..1	gap2	ATCEA4C74349_1	89	ATL8C49709:595..153	0.58					
158586	ATU0020526	ATL8C49407:75..749	gap2	ATCEA4S7746	89	ATL8C49407:75..637	0.57					
158587	ATU0020527	ATL8C44840:110..738	gap2	ATCEA4S14102, ATCEA4C3297_1	89, 82	ATL8C44840:110..734	0.57					
158588	ATU0020528	ATL8S20166:449..1	gap2	ATCEA4C120100_1	89	ATL8S20166:348..223	0.56					
158589	ATU0020529	ATL8C3148:1349..1854	gap2	ATCEA4C7081_1	89	ATL8C3148:1349..1745	0.56					

158590	ATU020530	ATL8C4008:1209..1732	gap2	ATCEA4S12925	89	ATL8C4008:1209..1399	0.55					
158591	ATU020531	ATL8C15683:87..529	gap2	ATCEA4C79181_1	89	ATL8C15683:87..529	0.54					
158592	ATU020532	ATL8C31869:684..1815	gap2	ATCEA4S1892	89	ATL8C31869:684..1815	0.54					
158593	ATU020533	ATL8C35460:914..1843	gap2	ATCEA4C627_2	89	ATL8C35460:914..1782	0.54					
158594	ATU020534	ATL8S2063:1..449	gap2	ATCEA4C720_1	89	ATL8S2063:225..358	0.54					
158595	ATU020535	ATL8C41752:10197..3487	gap2	ATCEA4S81	88	ATL8C41752:9715..3487	0.54	g4567296, g4773920	100, 100	2314, 2702	9.9e-211, 2.8e-274	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AF147259) F10A2.17 gene product [Arabi

												dopsis thaliana]
158596	ATU0205 36	ATL8C18722:772..1	gap2	ATCEA4C65821_2	89	ATL8C18722:761..253	0.53					
158597	ATU0205 37	ATL8C23996:25..1392	gap2	ATCEA4S32955	89	ATL8C23996:25..1392	0.53					
158598	ATU0205 38	ATL8C16939:1783..159	gap2	ATCEA4S26242, ATCEA4S1209, ATCEA4C99289_1	89, 87, 84	ATL8C16939:1783..159	0.53					
158599	ATU0205 39	ATL8C4020:1..499	gap2	ATCEA4C9178_2, ATCEA4C9178_1	89, 88	ATL8C4020:180..455	0.53					
158600	ATU0205 40	ATL8C19953:52..889	gap2	ATCEA4S30661	89	ATL8C19953:889..52	0.52					
158601	ATU0205 41	ATL8C19728:423..644	gap2	ATCEA4C36346_1	89	ATL8C19728:425..556	0.51					
158602	ATU0205 42	ATL8C45602:91..1496	gap2	ATCEA4C159570_1	89	ATL8C45602:1496..91	0.51					
158603	ATU0205 43	ATL8C48806:529..1025	gap2	ATCEA4S31296	89	ATL8C48806:535..965	0.51					

158604	ATU0205 44	ATL8C41360:1336..922	gap2	ATCEA4S178, ATCEA4S253	89, 89	ATL8C41360:1260..1136	0.50					
158605	ATU0205 45	ATL8C30373:36..705	gap2	ATCEA4C98390_1	89	ATL8C30373:78..705	0.50					
158606	ATU0205 46	ATL8S26843:47..621	gap2	ATCEA4S5770	89	ATL8S26843:47..210	0.50					
158607	ATU0205 47	ATL8S19196:60..407	gap2	ATCEA4C30355_1	89	ATL8S19196:60..297	0.50					
158608	ATU0205 48	ATL8C34093:1309..1	gap2	ATCEA4C38163_1, ATCEA4S13088	89, 89	ATL8C34093:1309..290	0.49					
158609	ATU0205 49	ATL8C1617:6604..4757	gap2	ATCEA4S13901	89	ATL8C1617:6186..4757	0.49					
158610	ATU0205 50	ATL8C1682:226..503	gap2	ATCEA4S6135	89	ATL8C1682:226..503	0.48					
158611	ATU0205 51	ATL8S25362:1..363	gap2	ATCEA4S1820	89	ATL8S25362:55..363	0.46					
158612	ATU0205 52	ATL8C4791:3415..87	gap2	ATCEA4C1298_1	89	ATL8C4791:3415..87	0.45					
158613	ATU0205 53	ATL8S4614:456..47	gap2	ATCEA4C1960_1	89	ATL8S4614:284..192	0.45					
158614	ATU0205 54	ATL8S24087:697..28	gap2	ATCEA4C51855_1	89	ATL8S24087:663..28	0.45					
158615	ATU0205 55	ATL8C6374:700..108	gap2	ATCEA4C143742_1	89	ATL8C6374:789..108	0.45					

		9				9						
158616	ATU020556	ATL8C42624:1396..732	gap2	ATCEA4S15669	89	ATL8C42624:1135..732	0.45					
158617	ATU020557	ATL8C31210:2596..1131	gap2	ATCEA4C30529_1	89	ATL8C31210:2596..1296	0.43					
158618	ATU020558	ATL8C25820:42..685	gap2	ATCEA4S33358	89	ATL8C25820:42..310	0.43					
158619	ATU020559	ATL8C25255:663..131	gap2	ATCEA4S21485	89	ATL8C25255:619..392	0.43					
158620	ATU020560	ATL8C14707:1..121	gap2	ATCEA4C912_1	89	ATL8C14707:49..93	0.42					
158621	ATU020561	ATL8C32317:540..852	gap2	ATCEA4C43324_1	89	ATL8C32317:837..593	0.42					
158622	ATU020562	ATL8C32655:962..2059	gap2	ATCEA4S5293	89	ATL8C32655:962..2059	0.42					
158623	ATU020563	ATL8C29126:320..730	gap2	ATCEA4C18997_1	89	ATL8C29126:320..728	0.42					
158624	ATU020564	ATL8C10416:525..2543	gap2	ATCEA4C18809_1	89	ATL8C10416:525..2369	0.41					
158625	ATU020565	ATL8C36163:1..125	gap2	ATCEA4C92_1	89							
158626	ATU020566	ATL8C9737:16	gap2	ATCEA4C17060	89							

		21..17 17		_1								
158627	ATU020 567	ATL8C2 4293:1 398..1 135	gap2	ATCEA4 S27673	89							
158628	ATU020 568	ATL8C2 9382:1 837..1 618	gap2	ATCEA4 S35285	89							
158629	ATU020 569	ATL8C3 8428:1 525..1 335	gap2	ATCEA4 S9859	89							
158630	ATU020 570	ATL8C1 9928:7 12..81 9	gap2	ATCEA4 C50954 _1	89							
158631	ATU020 571	ATL8C3 846:92 12..88 32	gap2	ATCEA4 S7	89							
158632	ATU020 572	ATL8C9 657:17 23..20 78	gap2	ATCEA4 S178	89							
158633	ATU020 573	ATL8C4 0590:4 920..4 781	gap2	ATCEA4 S253	89							
158634	ATU020 574	ATL8S6 000:15 2..1	gap2	ATCEA4 S8351	89							
158635	ATU020 575	ATL8C3 1387:6 646..6 291	gap2	ATCEA4 S178	89							
158636	ATU020 576	ATL8C4 7744:5 25..88	gap2	ATCEA4 S32256	89							

		3										
158637	ATU020577	ATL8S3299:1..189	gap2	ATCEA4S14885, ATCEA4S28935, ATCEA4S10699	89, 87, 82							
158638	ATU020578	ATL8C1817:1979..2189	gap2	ATCEA4S3937	89							
158639	ATU020579	ATL8S5474:256..1	gap2	ATCEA4S11702	89							
158640	ATU020580	ATL8C381:86..635	gap2	ATCEA4S34374	89							
158641	ATU020581	ATL8C31387:6152..6291	gap2	ATCEA4S253	89							
158642	ATU020582	ATL8S4627:466..1	gap2	ATCEA4S31053	89							
158643	ATU020583	ATL8S28683:1..380	gap2	ATCEA4S11020, ATCEA4S4379	89, 87							
158644	ATU020584	ATL8C31451:466..213	gap2	ATCEA4S1295	89							
158645	ATU020585	ATL8C27396:3115..3334	gap2	ATCEA4S17585	89							
158646	ATU020	ATL8C3	gap2	ATCEA4	89							

	586	1387:5660..5892		S344								
158647	ATU020587	ATL8C476:2067..2178	gap2	ATCEA4S23924	89							
158648	ATU020588	ATL8S4384:99..1	gap2	ATCEA4C35246_1	89							
158649	ATU020589	ATL8C47577:113..631	gap2	ATCEA4C99425_1	89							
158650	ATU020590	ATL8C38620:727..1080	gap2	ATCEA4S34627	89							
158651	ATU020591	ATL8C39279:2728..2826	gap2	ATCEA4S5514	89							
158652	ATU020592	ATL8S6846:1..104	gap2	ATCEA4S33179, ATCEA4S27666	89, 88							
158653	ATU020593	ATL8C26703:833..1265	gap2	ATCEA4C26322_2, ATCEA4S25949	89, 84							
158654	ATU020594	ATL8C8855:1115..695	gap2	ATCEA4S5550, ATCEA4S6771	89, 83							
158655	ATU020595	ATL8S3767:497..75	gap2	ATCEA4S29880	89							
158656	ATU020	ATL8S3	gap2	ATCEA4	89							

	596	690:31 1..1		C59935 _1								
158657	ATU020 597	ATL8C3 5965:1 220..6 93	gap2	ATCEA4 S33306	89							
158658	ATU020 598	ATL8S2 588:42 9..320	gap2	ATCEA4 C49893 _1	89							
158659	ATU020 599	ATL8C3 5458:7 62..97 3	gap2	ATCEA4 S4817	89							
158660	ATU020 600	ATL8C3 7962:1 65..33 9	gap2	ATCEA4 S15834	89							
158661	ATU020 601	ATL8C5 0151:5 07..28 0	gap2	ATCEA4 C90888 _1	89							
158662	ATU020 602	ATL8C2 9939:1 ..371	gap2	ATCEA4 S13047	89							
158663	ATU020 603	ATL8C1 6633:1 550..1 118	gap2	ATCEA4 S23113	89							
158664	ATU020 604	ATL8S2 4631:8 5..1	gap2	ATCEA4 S35993	89							
158665	ATU020 605	ATL8C1 2934:6 03..70 3	gap2	ATCEA4 S27321	89							
158666	ATU020 606	ATL8C2 3580:1 27..44 2	gap2	ATCEA4 S31566	89							
158667	ATU020	ATL8C2	gap2	ATCEA4	89							

	607	4675:3175..3548		S344								
158668	ATU020608	ATL8C12927:1..178	gap2	ATCEA4C917_5, ATCEA4S20791	89, 83							
158669	ATU020609	ATL8S410:1..286	gap2	ATCEA4C226311	89							
158670	ATU020610	ATL8C9801:898..438	gap2	ATCEA4C123287_1	89							
158671	ATU020611	ATL8C10462:1931..2281	gap2	ATCEA4S26656	89							
158672	ATU020612	ATL8C30102:777..535	gap2	ATCEA4S32398	89							
158673	ATU020613	ATL8C6952:1197..204	gap2	ATCEA4S19108, ATCEA4C719261	89, 87							
158674	ATU020614	ATL8C14795:2234..1861	gap2	ATCEA4S3610	89							
158675	ATU020615	ATL8S3043:285..1	gap2	ATCEA4C116901_1	89							
158676	ATU020616	ATL8C29337:1190..757	gap2	ATCEA4S4062	89							
158677	ATU020	ATL8C4	gap2	ATCEA4	89							

	617	6985:1892..1317		S35318								
158678	ATU020618	ATL8C23214:364..715	gap2	ATCEA4S15761	89							
158679	ATU020619	ATL8C23595:226..1237	gap2	ATCEA4C60915_1, ATCEA4S25637	89, 83							
158680	ATU020620	ATL8C46284:331..1	gap2	ATCEA4C28068_1, ATCEA4S31617	89, 87							
158681	ATU020621	ATL8S3680:1..442	gap2	ATCEA4S16043, ATCEA4S33054	89, 82							
158682	ATU020622	ATL8C46564:3260..3617	gap2	ATCEA4S27391	89							
158683	ATU020623	ATL8C36586:1557..2381	gap2	ATCEA4S14449, ATCEA4S9318	88, 82			g629670	100	725	6.0e-60	hypothetical protein - tomato []
158684	ATU020624	ATL8C39173:245..1	gap2	ATCEA4S4170	89							
158685	ATU020625	ATL8C10048:354..185	gap2	ATCEA4S10497	89							
158686	ATU020	ATL8C2	gap2	ATCEA4	89							

	626	4341:1834..1534		S4254								
158687	ATU020627	ATL8C39164:3205..3542	gap2	ATCEA4S11406	89							
158688	ATU020628	ATL8C36931:1184..1285	gap2	ATCEA4S13554	89							
158689	ATU020629	ATL8C29881:343..674	gap2	ATCEA4S6143	89							
158690	ATU020630	ATL8C16567:660..1005	gap2	ATCEA4S26595	89							
158691	ATU020631	ATL8C379:3363..2870	gap2	ATCEA4S23860	89							
158692	ATU020632	ATL8C246:310..771	gap2	ATCEA4C159870_1	89							
158693	ATU020633	ATL8C28865:1..271	gap2	ATCEA4S26629	89							
158694	ATU020634	ATL8C21810:2459..418	gap2	ATCEA4C19193_2, ATCEA4C46799_1, ATCEA4S12092	88, 86, 82			g4734009	100	901	6.7e-76	(AC007178) hypothetical protein [Arabidopsis thaliana]
158695	ATU020	ATL8C1	gap2	ATCEA4	89							

	635	2354:741..428		C121294_1								
158696	ATU020636	ATL8C29271:79..161	gap2	ATCEA4C36955_1	89							
158697	ATU020637	ATL8C35714:3198..3090	gap2	ATCEA4S27451	89							
158698	ATU020638	ATL8C15597:4385..4237	gap2	ATCEA4S26911	89							
158699	ATU020639	ATL8S28289:199..1	gap2	ATCEA4C95106_1	89							
158700	ATU020640	ATL8C13180:1..73	gap2	ATCEA4S15141	89							
158701	ATU020641	ATL8S24811:370..1	gap2	ATCEA4S33166	89							
158702	ATU020642	ATL8S689:1..289	gap2	ATCEA4S30381,ATCEA4C6361_1	89, 84							
158703	ATU020643	ATL8C36808:1..221	gap2	ATCEA4S34597	89							
158704	ATU020644	ATL8C3893:2266..1684	gap2	ATCEA4S34948	89							
158705	ATU020645	ATL8C23468:654..1	gap2	ATCEA4C127673_1	89							
158706	ATU020	ATL8C2	gap2	ATCEA4	89							

	646	3309:2725..2856		S31325								
158707	ATU020647	ATL8C9872:151..479	gap2	ATCEA4S24130	89							
158708	ATU020648	ATL8C17875:418..134	gap2	ATCEA4S11406	89							
158709	ATU020649	ATL8C1608:1962..1420	gap2	ATCEA4C35606_1	89							
158710	ATU020650	ATL8C20627:1390..1044	gap2	ATCEA4S29775	89							
158711	ATU020651	ATL8C23402:63..406	gap2	ATCEA4S178	89							
158712	ATU020652	ATL8C14650:305..1	gap2	ATCEA4S25926	89							
158713	ATU020653	ATL8C22884:5099..4965	gap2	ATCEA4S11274,ATCEA4S11275	89, 84							
158714	ATU020654	ATL8C45904:571..344	gap2	ATCEA4C37414_1	89							
158715	ATU020655	ATL8S11374:436..1	gap2	ATCEA4S320,ATCEA4C4045_1	89, 85							
158716	ATU020656	ATL8S10016:7	gap2	ATCEA4S878	89							

		0..637										
158717	ATU020657	ATL8C12756:285..1	gap2	ATCEA4C11852_1	89							
158718	ATU020658	ATL8C9984:469..844	gap2	ATCEA4S81	89							
158719	ATU020659	ATL8C13056:142..1	gap2	ATCEA4S31796	89							
158720	ATU020660	ATL8C18111:1..131	gap2	ATCEA4C5147_1	89							
158721	ATU020661	ATL8C1513:276..1	gap2	ATCEA4C518_1	89							
158722	ATU020662	ATL8C19316:985..889	gap2	ATCEA4C152647_1	89							
158723	ATU020663	ATL8C19329:2939..2566	gap2	ATCEA4S344	89							
158724	ATU020664	ATL8C44580:781..928	gap2	ATCEA4S2316	89							
158725	ATU020665	ATL8C14194:193..564	gap2	ATCEA4S19870	89							
158726	ATU020666	ATL8S16820:129..1	gap2	ATCEA4C1278_6	89							
158727	ATU020667	ATL8C6279:825..1116	gap2	ATCEA4C5187_1	89							

158728	ATU020668	ATL8C34737:605..805	gap2	ATCEA4C71014_1	89							
158729	ATU020669	ATL8C5328:263..581	gap2	ATCEA4S8893	89							
158730	ATU020670	ATL8S16314:1..209	gap2	ATCEA4S30315	89							
158731	ATU020671	ATL8C3290:2913..3047	gap2	ATCEA4S370, ATCEA4S12699	89, 88							
158732	ATU020672	ATL8C41332:1..238	gap2	ATCEA4C29583_1	89							
158733	ATU020673	ATL8C26559:252..754	gap2	ATCEA4S13770, ATCEA4S33305	89, 85							
158734	ATU020674	ATL8S629:340..1	gap2	ATCEA4S321	89							
158735	ATU020675	ATL8C17407:2860..3212	gap2	ATCEA4S19014	89							
158736	ATU020676	ATL8C1275:206..725	gap2	ATCEA4C119309_1	89							
158737	ATU020677	ATL8C5414:1954..1484	gap2	ATCEA4S34889	89							
158738	ATU020678	ATL8C44179:5..198	gap2	ATCEA4S3329	89							
158739	ATU020	ATL8C1	gap2	ATCEA4	89							

	679	4208:131..1		S12231								
158740	ATU020680	ATL8S21156:382..486	gap2	ATCEA4C7743_1	89							
158741	ATU020681	ATL8C1804:761..1096	gap2	ATCEA4S12209	89							
158742	ATU020682	ATL8S1711:1..106	gap2	ATCEA4S4723	89							
158743	ATU020683	ATL8C14987:816..997	gap2	ATCEA4C31505_1	89							
158744	ATU020684	ATL8C41344:237..1	gap2	ATCEA4S15259	89							
158745	ATU020685	ATL8C19093:928..682	gap2	ATCEA4S30614	89							
158746	ATU020686	ATL8S17260:1..433	gap2	ATCEA4S4499	89							
158747	ATU020687	ATL8C5524:110..1	gap2	ATCEA4S7112	89							
158748	ATU020688	ATL8C33285:108..1493	gap2	ATCEA4C305_1, ATCEA4S15503, ATCEA4C307_1	88, 88, 84			g1170409	100	1201	1.1e-95	HOMEOBOX-LEUCINE ZIPPER PROTEIN HAT22 (HD-ZIP

												PROTEIN 22) [Arabidopsis thaliana]
158749	ATU020689	ATL8C44866:728..204	gap2	ATCEA4C36520_1	89							
158750	ATU020690	ATL8C19001:1140..686	gap2	ATCEA4S11088	89							
158751	ATU020691	ATL8C33278:6060..6428	gap2	ATCEA4S33843, ATCEA4S3212	89, 89							
158752	ATU020692	ATL8C47483:1233..578	gap2	ATCEA4S30777, ATCEA4S31459	89, 87							
158753	ATU020693	ATL8S15763:82..1	gap2	ATCEA4S35993	89							
158754	ATU020694	ATL8C49913:2404..2705	gap2	ATCEA4S13901	89							
158755	ATU020695	ATL8C46638:127..482	gap2	ATCEA4S178	89							
158756	ATU020696	ATL8C47882:605..963	gap2	ATCEA4S11927	89							
158757	ATU020	ATL8C2	gap2	ATCEA4	89							

	697	671:843..491		S18497								
158758	ATU020698	ATL8C33290:1952..839	gap2	ATCEA4C125937_1	88			g4733993	100	1349	6.6e-117	(AC007188) unknown protein [Arabidopsis thaliana]
158759	ATU020699	ATL8C12624:3501..3627	gap2	ATCEA4C35742_1	89							
158760	ATU020700	ATL8C36456:1..420	gap2	ATCEA4C4022_1	89							
158761	ATU020701	ATL8C47951:4534..4890	gap2	ATCEA4S2364	89							
158762	ATU020702	ATL8C41200:241..645	gap2	ATCEA4S12933	89							
158763	ATU020703	ATL8S175:481..558	gap2	ATCEA4S2960	89							
158764	ATU020704	ATL8C19660:1..228	gap2	ATCEA4C156_9	89							
158765	ATU020705	ATL8C17780:705..1045	gap2	ATCEA4S26696, ATCEA4S22076	89, 86							
158766	ATU020706	ATL8C26880:6	gap2	ATCEA4S2299	89							

		95..417										
158767	ATU020707	ATL8C49328:1020..1277	gap2	ATCEA4C44083_1	89							
158768	ATU020708	ATL8C16472:1..180	gap2	ATCEA4S26357	89							
158769	ATU020709	ATL8C43951:1..312	gap2	ATCEA4S27391	89							
158770	ATU020710	ATL8C39006:1786..2208	gap2	ATCEA4S12828	89							
158771	ATU020711	ATL8C3688:3728..6957	gap2	ATCEA4S81	88			g4309764, g4567296	100, 63	991, 1481	2.2e-74, 2.6e-126	(AC006217) putative retroelement integrase [Arabidopsis thaliana]; (AC006918) putative Athila retroelement ORF1 protein [Arabidopsis

												thaliana]
158772	ATU020712	ATL8C5819:2731..2190	gap2	ATCEA4C129881_1	89							
158773	ATU020713	ATL8C32111:208..1	gap2	ATCEA4S577	89							
158774	ATU020714	ATL8S27608:220..136	gap2	ATCEA4C125944_1	89							
158775	ATU020715	ATL8C19688:228..506	gap2	ATCEA4S3005	89							
158776	ATU020716	ATL8C25228:1..430	gap2	ATCEA4C142658_1	89							
158777	ATU020717	ATL8C32061:150..1	gap2	ATCEA4S11192	89							
158778	ATU020718	ATL8S27639:1..341	gap2	ATCEA4C2503_1	89							
158779	ATU020719	ATL8C5989:121..1	gap2	ATCEA4S5633	89							
158780	ATU020720	ATL8C28277:303..33	gap2	ATCEA4C120898_1	89							
158781	ATU020721	ATL8S7364:1..192	gap2	ATCEA4S3737	89							
158782	ATU020722	ATL8C14447:5155..2338	gap2	ATCEA4S27399	88			g4773908	100	3675	0.0	(AF147259) No definition

												line found [Arabidopsis thaliana]
158783	ATU020723	ATL8C5999:108..1	gap2	ATCEA4S4704	89							
158784	ATU020724	ATL8C4384:66..406	gap2	ATCEA4S10649	89							
158785	ATU020725	ATL8C43839:3178..2662	gap2	ATCEA4C127906_1	89							
158786	ATU020726	ATL8S7375:470..643	gap2	ATCEA4S12219	89							
158787	ATU020727	ATL8C45076:6765..4107	gap2	ATCEA4S27399	88			g4773908	100	3042	1.8e-279	(AF147259) No definition line found [Arabidopsis thaliana]
158788	ATU020728	ATL8C43836:618..970	gap2	ATCEA4S30656	89							
158789	ATU020729	ATL8C45090:2763..2336	gap2	ATCEA4S60	89							
158790	ATU020730	ATL8S4532:39	gap2	ATCEA4C3928_	89							

		4..123		1								
158791	ATU020731	ATL8C37350:259..1	gap2	ATCEA4C7585_1	89							
158792	ATU020732	ATL8S23676:508..1	gap2	ATCEA4C397_1	89							
158793	ATU020733	ATL8C6599:1..625	gap2	ATCEA4C28531_2, ATCEA4C28531_1	89, 89							
158794	ATU020734	ATL8C29980:537..855	gap2	ATCEA4S30302	89							
158795	ATU020735	ATL8C12482:1..458	gap2	ATCEA4S33405	89							
158796	ATU020736	ATL8C8894:338..215	gap2	ATCEA4C20291_2	89							
158797	ATU020737	ATL8S15064:179..551	gap2	ATCEA4C18199_1	89							
158798	ATU020738	ATL8C3976:1120..830	gap2	ATCEA4S859	89							
158799	ATU020739	ATL8C47721:483..84	gap2	ATCEA4S4791, ATCEA4S4790, ATCEA4S4792	89, 85, 82							
158800	ATU020740	ATL8C6189:581..736	gap2	ATCEA4S26733	89							

158801	ATU020741	ATL8S18082:226..424	gap2	ATCEA4S977	89							
158802	ATU020742	ATL8C43741:307..416	gap2	ATCEA4S6501	89							
158803	ATU020743	ATL8C36967:407..625	gap2	ATCEA4S32127	89							
158804	ATU020744	ATL8C14082:1079..693	gap2	ATCEA4S26554	89							
158805	ATU020745	ATL8S18096:122..1	gap2	ATCEA4S7768	89							
158806	ATU020746	ATL8C1972:102..1	gap2	ATCEA4C5025_2	89							
158807	ATU020747	ATL8C14366:851..989	gap2	ATCEA4S11794	89							
158808	ATU020748	ATL8C40088:1077..907	gap2	ATCEA4S12435	89							
158809	ATU020749	ATL8C40123:1224..758	gap2	ATCEA4S34877	89							
158810	ATU020750	ATL8S13862:437..54	gap2	ATCEA4S30680,ATCEA4S30091	89, 85							
158811	ATU020	ATL8C1	gap2	ATCEA4	89							

	751	8907:1059..471		C76359_1								
158812	ATU020752	ATL8C3109:701..824	gap2	ATCEA4S7131	89							
158813	ATU020753	ATL8C14079:756..618	gap2	ATCEA4S253	89							
158814	ATU020754	ATL8C27921:3796..3869	gap2	ATCEA4S155	89							
158815	ATU020755	ATL8C45635:1962..2303	gap2	ATCEA4S10329, ATCEA4S11847, ATCEA4S31724	89, 84, 82							
158816	ATU020756	ATL8S80:343..545	gap2	ATCEA4S34927	89							
158817	ATU020757	ATL8S1454:1..211	gap2	ATCEA4S29075	89							
158818	ATU020758	ATL8C25766:1280..1060	gap2	ATCEA4C24450_1	89							
158819	ATU020759	ATL8S18812:1..467	gap2	ATCEA4S29738	89							
158820	ATU020760	ATL8C43309:1196..1354	gap2	ATCEA4C30526_1	89							
158821	ATU020	ATL8C4	gap2	ATCEA4	89							

	761	5435:1500..1654		S8255								
158822	ATU020762	ATL8S18085:97..1	gap2	ATCEA4S20243, ATCEA4S22853, ATCEA4S22320	89, 86, 83							
158823	ATU020763	ATL8C24259:180..74	gap2	ATCEA4C30519_1	89							
158824	ATU020764	ATL8C2996:524..761	gap2	ATCEA4S26992	89							
158825	ATU020765	ATL8C137:1..255	gap2	ATCEA4C64429_1, ATCEA4S31363	89, 83							
158826	ATU020766	ATL8S26657:275..190	gap2	ATCEA4S36264	89							
158827	ATU020767	ATL8C6655:838..454	gap2	ATCEA4C95289_1	89							
158828	ATU020768	ATL8C11530:1344..1416	gap2	ATCEA4C19483_1	89							
158829	ATU020769	ATL8S8215:82..1	gap2	ATCEA4S35993	89							
158830	ATU020770	ATL8C33664:430..904	gap2	ATCEA4C5214_1	89							

158831	ATU020771	ATL8S8490:529..165	gap2	ATCEA4C117621_1	89							
158832	ATU020772	ATL8C40215:211..555	gap2	ATCEA4S3138	89							
158833	ATU020773	ATL8C12240:3500..3856	gap2	ATCEA4S178	89							
158834	ATU020774	ATL8C7099:1358..1221	gap2	ATCEA4C20869_1	89							
158835	ATU020775	ATL8C25072:1272..1509	gap2	ATCEA4S27466	89							
158836	ATU020776	ATL8C33952:540..159	gap2	ATCEA4C20620_1	89							
158837	ATU020777	ATL8S8657:77..1	gap2	ATCEA4S35993	89							
158838	ATU020778	ATL8C14029:2827..2966	gap2	ATCEA4S253	89							
158839	ATU020779	ATL8S2738:82..1	gap2	ATCEA4S35993	89							
158840	ATU020780	ATL8S8689:66..571	gap2	ATCEA4C102802	89							
158841	ATU020781	ATL8C21303:1310..900	gap2	ATCEA4S4737	89							

158842	ATU020782	ATL8S13314:90..1	gap2	ATCEA4S3937	89							
158843	ATU020783	ATL8C14776:13145..13007	gap2	ATCEA4S253	89							
158844	ATU020784	ATL8C41336:255..84	gap2	ATCEA4C396_1	89							
158845	ATU020785	ATL8S9159:121..1	gap2	ATCEA4S10490	89							
158846	ATU020786	ATL8C40945:686..474	gap2	ATCEA4S35994	89							
158847	ATU020787	ATL8C6998:162..1	gap2	ATCEA4S26205	89							
158848	ATU020788	ATL8C16063:654..1016	gap2	ATCEA4S33774, ATCEA4S3384	89, 84							
158849	ATU020789	ATL8C27738:448..363	gap2	ATCEA4S1912	89							
158850	ATU020790	ATL8C42881:1..102	gap2	ATCEA4S11406	89							
158851	ATU020791	ATL8C33198:105..478	gap2	ATCEA4S344	89							
158852	ATU020792	ATL8C15856:1261..709	gap2	ATCEA4S184	89							

158853	ATU0207 93	ATL8C22248:283..664	gap2	ATCEA4S13131	89							
158854	ATU0207 94	ATL8S9374:327..124	gap2	ATCEA4S26566	89							
158855	ATU0207 95	ATL8C17216:816..983	gap2	ATCEA4C51318_1	89							
158856	ATU0207 96	ATL8S21554:140..1	gap2	ATCEA4C24485_1	89							
158857	ATU0207 97	ATL8C15845:148..1	gap2	ATCEA4S2751	89							
158858	ATU0207 98	ATL8C29627:338..1	gap2	ATCEA4S7290	89							
158859	ATU0207 99	ATL8S13138:1..437	gap2	ATCEA4C119196_1	89							
158860	ATU0208 00	ATL8C26546:1417..1872	gap2	ATCEA4C83564_1	89							
158861	ATU0208 01	ATL8S19528:1..482	gap2	ATCEA4S4335	89							
158862	ATU0208 02	ATL8S9713:205..526	gap2	ATCEA4S17126	89							
158863	ATU0208 03	ATL8C7143:390..945	gap2	ATCEA4S32448	89							
158864	ATU0208 04	ATL8C28386:181..409	gap2	ATCEA4S2604	89							

158865	ATU020805	ATL8S19751:206..500	gap2	ATCEA4S4107	89							
158866	ATU020806	ATL8C19925:1..1088	gap2	ATCEA4C230721	89							
158867	ATU020807	ATL8S19981:273..110	gap2	ATCEA4S12206	89							
158868	ATU020808	ATL8C40271:1473..984	gap2	ATCEA4S3937	89							
158869	ATU020809	ATL8C12674:288..151	gap2	ATCEA4S253	89							
158870	ATU020810	ATL8C34185:2210..1859	gap2	ATCEA4S27391	89							
158871	ATU020811	ATL8C7245:1756..1234	gap2	ATCEA4S35039	89							
158872	ATU020812	ATL8C30422:1..110	gap2	ATCEA4C1756_1	89							
158873	ATU020813	ATL8S24006:419..609	gap2	ATCEA4C432_1	89							
158874	ATU020814	ATL8C3137:303..424	gap2	ATCEA4C406_1	89							
158875	ATU020815	ATL8C42408:6712..7	gap2	ATCEA4S7707	89							

		084										
158876	ATU020816	ATL8C19954:458..1053	gap2	ATCEA4S30806	89							
158877	ATU020817	ATL8C14447:4868..5241	gap2	ATCEA4S344	89							
158878	ATU020818	ATL8C7363:403..65	gap2	ATCEA4S29811	89							
158879	ATU020819	ATL8C30915:664..825	gap2	ATCEA4S28649	89							
158880	ATU020820	ATL8C49000:409..808	gap2	ATCEA4S36133	89							
158881	ATU020821	ATL8C45669:1..138	gap2	ATCEA4S60	89							
158882	ATU020822	ATL8C7459:1799..1555	gap2	ATCEA4S13851	89							
158883	ATU020823	ATL8C15190:279..571	gap2	ATCEA4S26135,ATCEA4S27330	89, 89							
158884	ATU020824	ATL8S20120:74..382	gap2	ATCEA4C7441_3,ATCEA4C7441_2	89, 89							
158885	ATU020825	ATL8C21146:1	gap2	ATCEA4S32098	89							

		404..1194										
158886	ATU020826	ATL8C34164:2297..2540	gap2	ATCEA4S7130	89							
158887	ATU020827	ATL8S12799:207..1	gap2	ATCEA4S11727	89							
158888	ATU020828	ATL8C7538:674..1088	gap2	ATCEA4S35475	89							
158889	ATU020829	ATL8S12717:350..105	gap2	ATCEA4S18247	89							
158890	ATU020830	ATL8C42147:135..725	gap2	ATCEA4C45843_1	89							
158891	ATU020831	ATL8C20965:1052..786	gap2	ATCEA4S24557	89							
158892	ATU020832	ATL8C13594:2947..3332	gap2	ATCEA4C42561_1	89							
158893	ATU020833	ATL8S20318:513..714	gap2	ATCEA4S25107	89							
158894	ATU020834	ATL8C31678:1..150	gap2	ATCEA4C9632_1	89							
158895	ATU020835	ATL8C31174:1..228	gap2	ATCEA4S17336	89							
158896	ATU020	ATL8C1	gap2	ATCEA4	89							

	836	8740:1210..1349		S11794								
158897	ATU020837	ATL8C10516:555..869	gap2	ATCEA4S11645	89							
158898	ATU020838	ATL8C45817:1678..2141	gap2	ATCEA4S34056	89							
158899	ATU020839	ATL8S20716:1..145	gap2	ATCEA4S732	89							
158900	ATU020840	ATL8C45465:377..1	gap2	ATCEA4C4473_1	89							
158901	ATU020841	ATL8S950:1..510	gap2	ATCEA4C46203_1, ATCEA4C67123_1	89, 83							
158902	ATU020842	ATL8S20839:291..524	gap2	ATCEA4S33586	89							
158903	ATU020843	ATL8C7756:243..377	gap2	ATCEA4S253	89							
158904	ATU020844	ATL8S12325:108..1	gap2	ATCEA4S4200	89							
158905	ATU020845	ATL8C46828:1..1593	gap2	ATCEA4C54462_2, ATCEA4S12769, ATCEA4	88, 84, 82			g4455203	100	999	4.5e-86	(AL035440) putative protein [Arabi

				S34635								dopsis thaliana]
158906	ATU0020846	ATL8C30225:30606..1047	gap2	ATCEA4C25344_1	89							
158907	ATU0020847	ATL8C7955:2178..2557	gap2	ATCEA4S27418	89							
158908	ATU0020848	ATL8C48841:554..1184	gap2	ATCEA4S29072	89							
158909	ATU0020849	ATL8C1323:2419..1284	gap2	ATCEA4C470_1, ATCEA4S34674	89, 87							
158910	ATU0020850	ATL8C41823:1..169	gap2	ATCEA4S34247	89							
158911	ATU0020851	ATL8C35169:1..448	gap2	ATCEA4C18175_1	89							
158912	ATU0020852	ATL8C18717:903..1	gap2	ATCEA4S6797	89							
158913	ATU0020853	ATL8S12310:85..1	gap2	ATCEA4S35993	89							
158914	ATU0020854	ATL8S20866:87..1	gap2	ATCEA4S35993	89							
158915	ATU0020855	ATL8C48822:760..523	gap2	ATCEA4C28253_1	89							
158916	ATU020	ATL8C4	gap2	ATCEA4	89							

	856	1709:664..409		S25891								
158917	ATU020857	ATL8C873:5541..5309	gap2	ATCEA4C24061_1	89							
158918	ATU020858	ATL8C15118:742..323	gap2	ATCEA4C17690_1	89							
158919	ATU020859	ATL8C26165:167..643	gap2	ATCEA4C33253_2, ATCEA4C33253_1, ATCEA4S16176	89, 89, 86							
158920	ATU020860	ATL8C8496:176..1	gap2	ATCEA4S11718	89							
158921	ATU020861	ATL8C4074:2292..2360	gap2	ATCEA4C251_4	89							
158922	ATU020862	ATL8C48599:419..55	gap2	ATCEA4C6276_1	89							
158923	ATU020863	ATL8C35144:684..1	gap2	ATCEA4C50915_1	89							
158924	ATU020864	ATL8C25641:565..1	gap2	ATCEA4S31153, ATCEA4C29018_1	89, 83							
158925	ATU020865	ATL8S29367:1	gap2	ATCEA4S36192	89							

		81..38										
158926	ATU020866	ATL8C13256:603..1294	gap2	ATCEA4C12805_1, ATCEA4S35580	89, 86							
158927	ATU020867	ATL8C32891:1..334	gap2	ATCEA4S25087	89							
158928	ATU020868	ATL8S12009:88..1	gap2	ATCEA4S35993	89							
158929	ATU020869	ATL8C41606:1..83	gap2	ATCEA4S4723	89							
158930	ATU020870	ATL8C4074:1696..2050	gap2	ATCEA4S178	89							
158931	ATU020871	ATL8C10903:1..108	gap2	ATCEA4C907_1	89							
158932	ATU020872	ATL8C2741:265..1635	gap2	ATCEA4S60	88			g4567295	100	1845	5.9e-194	(AC006918) putative polpolyprotein [Arabidopsis thaliana]
158933	ATU020873	ATL8S23809:88..1	gap2	ATCEA4C5713_1	89							
158934	ATU020874	ATL8C26318:757..1096	gap2	ATCEA4S10487	89							
158935	ATU020	ATL8S3	gap2	ATCEA4	89							

	875	0918:179..353		C5744_1								
158936	ATU020876	ATL8C13580:4117..3761	gap2	ATCEA4S178	89							
158937	ATU020877	ATL8S22057:91..1	gap2	ATCEA4S35993	89							
158938	ATU020878	ATL8C87:570..368	gap2	ATCEA4S14115	89							
158939	ATU020879	ATL8C8744:1159..752	gap2	ATCEA4S11268	89							
158940	ATU020880	ATL8C45711:178..1	gap2	ATCEA4C70629_1	89							
158941	ATU020881	ATL8S22201:585..313	gap2	ATCEA4C5_3	89							
158942	ATU020882	ATL8C8758:66..841	gap2	ATCEA4C11176_1	89							
158943	ATU020883	ATL8C36384:1..255	gap2	ATCEA4C2037_1	89							
158944	ATU020884	ATL8C16239:1..106	gap2	ATCEA4S30506	89							
158945	ATU020885	ATL8C41420:1187..984	gap2	ATCEA4S13006	89							
158946	ATU020886	ATL8C45566:154..1	gap2	ATCEA4S34259,	89, 86							

				ATCEA4C14937_1								
158947	ATU020887	ATL8C20839:396..257	gap2	ATCEA4S253	89							
158948	ATU020888	ATL8C2625:1..268	gap2	ATCEA4S1028	89							
158949	ATU020889	ATL8S13417:1..207	gap2	ATCEA4C47238_1	89							
158950	ATU020890	ATL8C897:952..515	gap2	ATCEA4S12209	89							
158951	ATU020891	ATL8C29061:862..504	gap2	ATCEA4C4024_1	89							
158952	ATU020892	ATL8C9090:773..1262	gap2	ATCEA4S3937	89							
158953	ATU020893	ATL8C46281:843..971	gap2	ATCEA4S11704	89							
158954	ATU020894	ATL8C13433:369..779	gap2	ATCEA4C31816_1, ATCEA4S5625	89, 83							
158955	ATU020895	ATL8C9060:1664..1343	gap2	ATCEA4S26736, ATCEA4S19820	89, 82							
158956	ATU020896	ATL8C22366:5	gap2	ATCEA4S253	89							

		489..5350										
158957	ATU020897	ATL8S16236:141..489	gap2	ATCEA4C70629_1	89							
158958	ATU020898	ATL8C21366:1147..799	gap2	ATCEA4C35356_1	89							
158959	ATU020899	ATL8C33278:6407..5906	gap2	ATCEA4S34791	89							
158960	ATU020900	ATL8C22368:3422..3055	gap2	ATCEA4S178	89							
158961	ATU020901	ATL8C2493:85..387	gap2	ATCEA4C435_2	89							
158962	ATU020902	ATL8C46354:931..1172	gap2	ATCEA4C32478_1	89							
158963	ATU020903	ATL8C30732:525..1	gap2	ATCEA4C10982_1	89							
158964	ATU020904	ATL8C13071:2032..2385	gap2	ATCEA4S178	89							
158965	ATU020905	ATL8C21667:2532..3432	gap2	ATCEA4C35227_1	88			g3056583	100	1125	4.6e-109	(AC004255) T1F9.4 [Arabidopsis thaliana]
158966	ATU020	ATL8C2	gap2	ATCEA4	89							

	906	4163:1378..1100		S26966								
158967	ATU020907	ATL8C20377:1..161	gap2	ATCEA4C94142_1	89							
158968	ATU020908	ATL8S5302:309..114	gap2	ATCEA4C67531_1	89							
158969	ATU020909	ATL8C2240:1..296	gap2	ATCEA4S178	89							
158970	ATU020910	ATL8C23887:807..573	gap2	ATCEA4S32333	89							
158971	ATU020911	ATL8S2358:314..232	gap2	ATCEA4C30425_1	89							
158972	ATU020912	ATL8C23831:233..483	gap2	ATCEA4S10816	89							
158973	ATU020913	ATL8C46401:295..133	gap2	ATCEA4S26550	89							
158974	ATU020914	ATL8C25837:139..1	gap2	ATCEA4C81481_1	89							
158975	ATU020915	ATL8C24192:1402..1047	gap2	ATCEA4S178	89							
158976	ATU020916	ATL8C46487:1642..3429	gap2	ATCEA4S32334, ATCEA4S32120	88, 84			g3785980	100	880	8.8e-72	(AC005560) hypothetical protein

												[Arabidopsis thaliana]
158977	ATU020917	ATL8S2350:1..546	gap2	ATCEA4C6839_1	89							
158978	ATU020918	ATL8C11951:224..647	gap2	ATCEA4S6168	89							
158979	ATU020919	ATL8C11602:6203..6484	gap2	ATCEA4S113	89							
158980	ATU020920	ATL8C29385:694..460	gap2	ATCEA4S16167	89							
158981	ATU020921	ATL8S11013:85..1	gap2	ATCEA4S35993	89							
158982	ATU020922	ATL8C28215:441..262	gap2	ATCEA4S5521	89							
158983	ATU020923	ATL8S10835:82..1	gap2	ATCEA4S35993	89							
158984	ATU020924	ATL8S23591:82..1	gap2	ATCEA4S35993	89							
158985	ATU020925	ATL8C30672:521..302	gap2	ATCEA4S2473	89							
158986	ATU020926	ATL8C37754:679..1097	gap2	ATCEA4C92975_1	89							

158987	ATU020927	ATL8S23880:414..502	gap2	ATCEA4S20499	89							
158988	ATU020928	ATL8C942:1388..1689	gap2	ATCEA4S31000	89							
158989	ATU020929	ATL8C24281:835..962	gap2	ATCEA4S29643	89							
158990	ATU020930	ATL8S21089:207..1	gap2	ATCEA4C39277_2, ATCEA4C39277_1	89, 83							
158991	ATU020931	ATL8C11174:1..342	gap2	ATCEA4S32317	89							
158992	ATU020932	ATL8C14386:58..120	gap2	ATCEA4C39277_1	89							
158993	ATU020933	ATL8C2291:232..458	gap2	ATCEA4S10546	89							
158994	ATU020934	ATL8C22922:918..508	gap2	ATCEA4S30126	89							
158995	ATU020935	ATL8C23404:668..442	gap2	ATCEA4S13007	89							
158996	ATU020936	ATL8C24285:3890..3717	gap2	ATCEA4S26564	89							
158997	ATU020	ATL8C2	gap2	ATCEA4	89							

	937	3724:1832..1594		S34908								
158998	ATU020938	ATL8C3681:8867..9240	gap2	ATCEA4S344	89							
158999	ATU020939	ATL8C13936:4050..6347	gap2	ATCEA4S253	88	ATL8C13936:5742..6194	0.93	g4558684, g4006915	99, 44	319, 589	1.0e-19, 7.4e-58	(AC006586) hypothetical protein [Arabidopsis thaliana]; (Z99708) hypothetical protein [Arabidopsis thaliana]
159000	ATU020940	ATL8C8818:1..3101	gap2	ATCEA4S5928, ATCEA4S15238	88, 85	ATL8C8818:3076..1693	0.69	g2194120, g3935161	99, 32	273, 68	1.9e-27, 0.32	(AC002062) No definition line found [Arabidopsis thaliana]; (AC004557)

												F17L21.4 [Arabidopsis thaliana]
159001	ATU020941	ATL8C42579:162..471	gap2	ATCEA4C69693_1	88	ATL8C42579:162..471	0.54	g3023243	99	126	5.8e-09	PUTATIVE ACYLPHOSPHATASE (ACYLPHOSPHATE PHOSPHOHYDROLASE) [Bacillus subtilis]
159002	ATU020942	ATL8C43695:4506..67	gap2	ATCEA4C1869_1	88	ATL8C43695:4387..330	0.54	g2809240, g2435513	99, 35	512, 253		(AC002560) F21B7.9 [Arabidopsis thaliana]; (AF024504) similar to the CYSE/LACA/LPXA/NODL family of

												acetyl transferases ; most similar to serine acetyltransferases [Arabidopsis thaliana]
159003	ATU020943	ATL8C24789:662..9	gap2	ATCEA4S33455, ATCEA4S33461, ATCEA4S32729	88, 87, 83			g3980385	99	718	5.9e-57	(AC004561) putative 18 kDa class I heat shock protein [Arabidopsis thaliana]
159004	ATU020944	ATL8C22083:761..1278	gap2	ATCEA4C116289_1	88			g4558678	99	189	8.7e-17	(AC006586) unknown protein [Arabidopsis thaliana]
159005	ATU020945	ATL8C17297:5	gap2	ATCEA4C3041_	88			g4455327,	99, 74	104, 454	7.7e-06,	(AL035525)

		405..2274		1				g4263063			1.8e-53	hypothetical protein [Arabidopsis thaliana]; (AC005142) hypothetical protein [Arabidopsis thaliana]
159006	ATU020946	ATL8C30046:1..3430	gap2	ATCEA4S324	88			g4432794	97	4876	0.0	(AC006437) putative Tnp2 Tam1 transposon protein [Arabidopsis thaliana]
159007	ATU020947	ATL8C13593:1..1828	gap2	ATCEA4S11082	88			g3695396	95	1935	3.8e-149	(AF096372) contains similarity to Arabid

												opsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
159008	ATU020948	ATL8C2 2984:1874..234	gap2	ATCEA4S81	88	ATL8C2 2984:1717..234	0.69	g4567296	89	1940	5.8e-202	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
159009	ATU020949	ATL8C4 8017:279..2795	gap2	ATCEA4S28772	88	ATL8C4 8017:279..2379	0.92	g4753658	87	1069	5.6e-121	(AL049751) putative protein [Arabidopsis thaliana]
159010	ATU020950	ATL8C4 363:1..3880	gap2	ATCEA4C7425_1,	88, 83, 83	ATL8C4 363:303..385	0.88	g4741190	84	3093	8.6e-255	(AL049746) ABC-

				ATCEA4S3942, ATCEA4S31690		8						type transport-like protein [Arabidopsis thaliana]
159011	ATU020951	ATL8C30838:23..1204	gap2	ATCEA4C45013_1	88			g3435279	84	1419	3.2e-117	(AF082391) protein kinase homolog [Arabidopsis thaliana]
159012	ATU020952	ATL8C13155:1..2892	gap2	ATCEA4S31824	88	ATL8C13155:92..2892	0.86	g4191782	81	1363	4.4e-112	(AC005917) WD-40 repeat protein [Arabidopsis thaliana]
159013	ATU020953	ATL8C10726:1..1604	gap2	ATCEA4C40880_1	88			g82201, g82519	80, 50	126, 71	9.6e-05, 3.4e-06	hypothetical protein 131 - common tobacco chloro

												plast [Nicotiana tabacum]; hypothetical 15K protein (trnH-trnV intergenic region) - rice chloroplast [Oryza sativa]
159014	ATU020954	ATL8C32763:5130..2720	gap2	ATCEA4C42331_1	88			g4263543	80	2543	1.3e-263	(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
159015	ATU020955	ATL8C40588:5158..1	gap2	ATCEA4S27399, ATCEA4	88, 83	ATL8C40588:1424..42,	0.90, 0.69	g4773920, g4567296	79, 73	2043, 1842	4.0e-188, 4.7e-177	(AF147259) F10A2.17

				S81		ATL8C40588:4837..1508						gene product [Arabidopsis thaliana]; (AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
159016	ATU020956	ATL8C41949:4186..79	gap2	ATCEA4S703	88	ATL8C41949:4129..79	0.47	g3242713	79	1867	2.0e-189	(AC003040) putative transposase [Arabidopsis thaliana]
159017	ATU020957	ATL8C38939:217..1708	gap2	ATCEA4S28504	88	ATL8C38939:1001..1523	0.90	g1619300	78	193	3.5e-14	(X95269) LRR protein [Lycopersicon esculentum]

159018	ATU020958	ATL8C837:2166..815	gap2	ATCEA4S31388	88	ATL8C837:1552..815	0.60	g4325372	78	155	1.8e-15	(AF128396) contains similarity to protein disulfide isomerases [Arabidopsis thaliana]
159019	ATU020959	ATL8C7795:699..292	gap2	ATCEA4S11681, ATCEA4C3872_1	88, 87	ATL8C7795:602..292	0.52	g3132475	77	537	1.9e-53	(AC003096) similar to proline-rich protein [Arabidopsis thaliana]
159020	ATU020960	ATL8C7648:1771..1	gap2	ATCEA4S32571	88			g2244820	76	477	3.4e-47	(Z97336) calmodulin [Arabidopsis thaliana]
159021	ATU020961	ATL8S20993:87..448	gap2	ATCEA4C23385_1	88			g4926822	75	167	7.3e-09	(AC004135) T17H7.

												7 [Arabidopsis thaliana]
159022	ATU020962	ATL8C13285:182..5316	gap2	ATCEA4C18511_1	88	ATL8C13285:182..301, ATL8C13285:414..5288	0.86, 0.43	g2245009	74	2457	2.5e-254	(Z97341) hypothetical protein [Arabidopsis thaliana]
159023	ATU020963	ATL8C3638:1693..1	gap2	ATCEA4S3903	88	ATL8C3638:1637..390	0.63	g4467123, g4467124	74, 49	486, 696	1.0e-44, 2.2e-64	(AL035538) hypothetical protein [Arabidopsis thaliana]; (AL035538) hypothetical protein [Arabidopsis thaliana]
159024	ATU020964	ATL8C21358:2786..223	gap2	ATCEA4S10469	88			g4557078	74	1813	1.0e-177	(AC007045) putative Tal1-1

												pol polypr otein, 5' partia l [Arabi dopsis thalia na]
159025	ATU020 965	ATL8C2 5028:4 4..252 1	gap2	ATCEA4 S7491	88	ATL8C2 5028:1 31..24 34	0.74	g45845 27	69	2395	7.0e-224	(AL049 607) putati ve protei n [Arabi dopsis thalia na]
159026	ATU020 966	ATL8C2 0360:1 032..3 11	gap2	ATCEA4 S31112	88	ATL8C2 0360:9 73..31 1	0.57	g39802 54	69	207	3.3e-11	(AJ006 053) peroxi somal membra ne protei n [Arabi dopsis thalia na]
159027	ATU020 967	ATL8C1 753:1. .2429	gap2	ATCEA4 S27391	88			g45672 96	69	336	2.0e-26	(AC006 918) putati ve Athila retroe lement ORF1

												protein [Arabidopsis thaliana]
159028	ATU020968	ATL8C12774:143..1042	gap2	ATCEA4S30094	88			g2341024	69	804	7.4e-63	(AC000104) F19P19.1 [Arabidopsis thaliana]
159029	ATU020969	ATL8C3236:559..6219	gap2	ATCEA4S13901	88	ATL8C3236:821..6219	0.74	g4263062	68	432	8.1e-43	(AC005142) hypothetical protein [Arabidopsis thaliana]
159030	ATU020970	ATL8C33178:2032..244	gap2	ATCEA4C233_2, ATCEA4C233_1	88, 83	ATL8C33178:1834..387	0.94	g3355308	67	2154	3.5e-226	(AJ009695) wall-associated kinase 4 [Arabidopsis thaliana]
159031	ATU020971	ATL8C8325:1708..1	gap2	ATCEA4C941_1, ATCEA4S18856	88, 82, 82	ATL8C8325:1702..472	0.59	g166878	67	904	8.6e-68	(M95796) St12p protein

				, ATCEA4 C941_2								[Arabidopsis thaliana]
159032	ATU020972	ATL8C3 6509:2006..1	gap2	ATCEA4 C5350_1	88	ATL8C3 6509:2006..531	0.43	g2500347	67	321	1.0e-19	NHP2/RS6 FAMILY PROTEIN YEL026W HOMOLOG []
159033	ATU020973	ATL8C2 1421:2155..1	gap2	ATCEA4 S31512, ATCEA4 S33736	88, 84	ATL8C2 1421:1939..468	0.86	g4539347	66	231	1.9e-22	(AL035539) putative growth regulator protein [Arabidopsis thaliana]
159034	ATU020974	ATL8C3 5309:72..1297	gap2	ATCEA4 C50402_1	88	ATL8C3 5309:240..1207	0.78	g4836883	66	682	5.7e-68	(AC007260) lcl|prt_seq No definition line found [Arabidopsis thaliana]
159035	ATU020	ATL8C1	gap2	ATCEA4	88, 85	ATL8C1	0.66	g62956	66	826	4.9e-	SRG1

	975	7069:1360..334		C139459_1, ATCEA4S26946		7069:1074..614		1			73	protein - Arabidopsis thaliana [Arabidopsis thaliana]
159036	ATU020976	ATL8C46212:2059..1	gap2	ATCEA4S2785	88	ATL8C46212:2013..123	0.56	g3056592	66	2321	2.9e-243	(AC004255) T1F9.13 [Arabidopsis thaliana]
159037	ATU020977	ATL8S10514:552..1	gap2	ATCEA4S7	88	ATL8S10514:263..108	0.99	g4468982	65	297	7.2e-24	(AL035605) putative protein [Arabidopsis thaliana]
159038	ATU020978	ATL8C650:2267..808	gap2	ATCEA4S27872, ATCEA4S31053	88, 87	ATL8C650:2119..978	0.84	g2224911	65	1089	1.9e-108	(U93048) somatic embryogenesis receptor-like kinase [Daucu

												s carota]
159039	ATU020979	ATL8C46847:1..1290	gap2	ATCEA4C128772_1	88	ATL8C46847:113..1265	0.76	g2194128	65	1549	2.3e-139	(AC002062) Strong similarity to Arabidopsis receptor-like kinase (gb|ATLECGENE) and F20P5.15. [Arabidopsis thaliana]
159040	ATU020980	ATL8C48843:1008..85	gap2	ATCEA4C92338_1	88	ATL8C48843:882..772	0.74	g4688615	65	641	3.2e-62	(AJ131636) D-type cyclin [Arabidopsis thaliana]
159041	ATU020981	ATL8C37082:2230..1	gap2	ATCEA4C18763_1	88			g4544450	65	590		(AC006592) hypothetical protein [Arabidopsis

												thaliana]
159042	ATU020982	ATL8C39617:1..3138	gap2	ATCEA4S3937, ATCEA4S11817	88, 83	ATL8C39617:562..3138	0.51	g4038066	64	319	8.0e-23	(AC005897) hypothetical protein [Arabidopsis thaliana]
159043	ATU020983	ATL8C45248:200..1484	gap2	ATCEA4C12134_1	88	ATL8C45248:613..1463	0.78	g3355469	63	754	2.5e-74	(AC004218) putative lysophospholipase [Arabidopsis thaliana]
159044	ATU020984	ATL8C20665:3872..1851	gap2	ATCEA4S1307	88	ATL8C20665:3380..2125	0.41	g3695378	63	211	0.00047	(AF096370) contains similarity to NAM (no apical meristem) - like proteins [Arabidopsis thalia

												na]
159045	ATU020985	ATL8C8043:2759..4688	gap2	ATCEA4C254_1	88			g3901294	63	2280	2.4e-212	(AF089711) rpp8 [Arabidopsis thaliana]
159046	ATU020986	ATL8C6249:292..1	gap2	ATCEA4C17626_1	88			g2245001	63	189	5.8e-16	(Z97341) similarity to NADH dehydrogenase (ubiquinone) [Arabidopsis thaliana]
159047	ATU020987	ATL8S9142:1..534	gap2	ATCEA4S14695, ATCEA4C26715_1	88, 88			g2289000	63	138	2.0e-12	(AC002335) hypothetical protein [Arabidopsis thaliana]
159048	ATU020988	ATL8S30899:729..104	gap2	ATCEA4C41492_2, ATCEA4S4540	88, 86	ATL8S30899:594..509	0.53	g2894561	62	427	9.9e-36	(AL021890) putative protein [Arabi

												dopsis thaliana]
159049	ATU020989	ATL8C42873:1..902	gap2	ATCEA4S11438	88			g4678358	62	1287	1.4e-123	(AL049659) cytochrome p450 like protein [Arabidopsis thaliana]
159050	ATU020990	ATL8S26898:550..1	gap2	ATCEA4C12492_1, ATCEA4S6281	88, 88			g1173045	61	195		60S RIBOSOMAL PROTEIN L37A [Brassica rapa]
159051	ATU020991	ATL8C23184:1..2918	gap2	ATCEA4C20886_1, ATCEA4S13828	88, 86	ATL8C23184:166..2159	0.82	g3478637	60	531	5.6e-44	(AC005546) R29425_1 [Homo sapiens]
159052	ATU020992	ATL8C20439:1361..1	gap2	ATCEA4C24310_1	88	ATL8C20439:1169..60	0.72	g3258576	59	310	1.5e-15	(U89959) Unknown protein [Arabidopsis thaliana]

159053	ATU020993	ATL8C15988:231..2031	gap2	ATCEA4S3937	88	ATL8C15988:298..902	0.83	g4773910	58	239	8.9e-21	(AF147259) No definition line found [Arabidopsis thaliana]
159054	ATU020994	ATL8C192:5603..2918	gap2	ATCEA4S31083	88			g3928083	58	823	3.9e-61	(AC005770) unknown protein [Arabidopsis thaliana]
159055	ATU020995	ATL8C3704:3347..2520	gap2	ATCEA4S2647	88			g3805763	58	953	1.3e-86	(AC005693) hypothetical protein [Arabidopsis thaliana]
159056	ATU020996	ATL8C24250:1347..1	gap2	ATCEA4C46799_1, ATCEA4C19193_1, ATCEA4C19193_2	88, 86, 83			g4734009	58	617	2.8e-59	(AC007178) hypothetical protein [Arabidopsis thalia

												na]
159057	ATU020997	ATL8C1061:5694..2382	gap2	ATCEA4S178, ATCEA4S253	88, 87	ATL8C1061:5425..4179	0.82	g4038056	57	1353	1.2e-126	(AC005897) putative transposon [Arabidopsis thaliana]
159058	ATU020998	ATL8C48023:3008..5118	gap2	ATCEA4S344	88			g4263063	55	1349	4.6e-126	(AC005142) hypothetical protein [Arabidopsis thaliana]
159059	ATU020999	ATL8C42856:8702..3728	gap2	ATCEA4S1245	88	ATL8C42856:8533..3728	0.70	g2864623	54	3630	0.0	(AL021811) putative protein [Arabidopsis thaliana]
159060	ATU021000	ATL8C29620:1..483	gap2	ATCEA4S36109	88	ATL8C29620:28..64	0.63	g3603473	54	202	3.6e-19	(AF090698) elicitor-responsive gene-3 [Oryza sativa

												]
159061	ATU021001	ATL8C946:11151..1592	gap2	ATCEA4S126	88	ATL8C946:11142..2986	0.67	g4388825, g4263051, g4850412	53, 39, 33	744, 76, 216	1.5e-75, 0.015, 4.5e-11	(AC006528) putative pol polyprotein with reverse transcriptase domain (Pfam: PF00078) [Arabidopsis thaliana]; (AC005142) hypothetical protein [Arabidopsis thaliana]; (AC007288) putative MuDR MURA transposase [Arabi

												dopsis thaliana]
159062	ATU021002	ATL8C36891:1..516	gap2	ATCEA4C20079_1	88	ATL8C36891:44..516	0.72	g2979546	52	292	8.4e-28	(AC003680) unknown protein [Arabidopsis thaliana]
159063	ATU021003	ATL8C45137:691..1	gap2	ATCEA4S36122	88			g2832663	52	89	3.0e-05	(AL021710) hypothetical protein [Arabidopsis thaliana]
159064	ATU021004	ATL8S5019:291..1	gap2	ATCEA4C2631_1	88			g2160147	52	262	6.5e-12	(AC000375) EST gb|ATTS3706 comes from this gene. [Arabidopsis thaliana]
159065	ATU021005	ATL8C47062:611..1	gap2	ATCEA4S10878	88	ATL8C47062:341..30	0.99	g4115379	51	611	4.3e-64	(AC005967) putative

												carbonyl reductase [Arabidopsis thaliana]
159066	ATU021006	ATL8C23086:774..1	gap2	ATCEA4C130693_1, ATCEA4C40365_1	88, 83	ATL8C23086:728..150	0.89	g3738315	51	456	3.1e-36	(AC005170) unknown protein [Arabidopsis thaliana]
159067	ATU021007	ATL8C19535:389..1	gap2	ATCEA4C926_1	88	ATL8C19535:265..22	0.87	g1076367	51	437	3.4e-33	peptidylprolyl isomerase (EC 5.2.1.8) ROC1 - Arabidopsis thaliana []
159068	ATU021008	ATL8C14172:244..1062	gap2	ATCEA4C71760_1	88	ATL8C14172:307..573	0.83	g2500376	51	216	1.0e-08	60S RIBOSOMAL PROTEIN L34 [Arabidopsis thaliana]

159069	ATU021009	ATL8S24956:17..522	gap2	ATCEA4S3569	88	ATL8S24956:137..456	0.55	g4455297	51	377	2.1e-38	(AL035528) hypothetical protein [Arabidopsis thaliana]
159070	ATU021010	ATL8C13526:493..2343	gap2	ATCEA4C46999_1, ATCEA4S26712	88, 83	ATL8C13526:603..2343	0.49	g4406817	51	83	1.9e-05	(AC006201) putative auxin-induced protein [Arabidopsis thaliana]
159071	ATU021011	ATL8S15855:1..296	gap2	ATCEA4C425_1, ATCEA4S16174	88, 86	ATL8S15855:59..140	0.50	g3608263	49	351	2.5e-12	(AB017565) Dof zinc finger protein [Arabidopsis thaliana]
159072	ATU021012	ATL8C12410:1..579	gap2	ATCEA4S20156	88			g3237304	49	216	8.0e-26	(U91561) pyridoxine 5'-phosph

												ate oxidase [Rattus norvegicus]
159073	ATU021013	ATL8C22688:3325..997	gap2	ATCEA4C92119_1	88	ATL8C22688:2863..1589	0.88	g4249562	48	348	2.9e-30	(AB003110) bete-glucosidase [Hypocrea jecorina]
159074	ATU021014	ATL8C30748:1939..1	gap2	ATCEA4S179, ATCEA4S3937	88, 87	ATL8C30748:1883..1465	0.54	g4432809, g4773910	48, 39	323, 174	7.8e-30, 3.2e-10	(AC006570) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thalia

												na]
159075	ATU021015	ATL8C27372:591..1	gap2	ATCEA4S28071	88	ATL8C27372:537..27	0.74	g117238	46	805		MAGNESIUM-CHELATASE SUBUNIT CHLI PRECURSOR (PROTEIN CS/CH-42) (MG-PROTOPORPHYRIN IX CHELATASE) [Euglena gracilis]
159076	ATU021016	ATL8C28742:1..791	gap2	ATCEA4C120105_1, ATCEA4S25562	88, 84	ATL8C28742:84..744	0.55	g1076634	46	254	2.7e-21	protein-serine/threonine kinase NPK15 - common tobacco [Nicotiana tabacum]
159077	ATU021017	ATL8C34650:1	gap2	ATCEA4C15011	88	ATL8C34650:9	0.54	g3132696	46	644	1.4e-58	(AF061962)

		106..1		4_1		59..184						SAR DNA-binding protein-1 [Pisum sativum]
159078	ATU021018	ATL8S28266:398..128	gap2	ATCEA4C9737_2	88			g4884033	46	184	7.7e-15	(AJ133753) peptide methionine sulfoxide reductase [Arabidopsis thaliana]
159079	ATU021019	ATL8S4791:1..595	gap2	ATCEA4C71186_1	88			g3461817	46	191	1.3e-18	(AC004138) unknown protein [Arabidopsis thaliana]
159080	ATU021020	ATL8S20420:1..630	gap2	ATCEA4C60241_1, ATCEA4S10165	88, 82			g2832683	46	849	4.8e-84	(AL021712) putative protein [Arabi

												dopsis thaliana]
159081	ATU021021	ATL8S27520:698..87	gap2	ATCEA4S8771	88	ATL8S27520:638..493	0.93	g1706368	45	643	6.7e-64	DIHYDROFLAVONOL-4-REDUCTASE (DFR) (DIHYDROKAEMPFEROL 4-REDUCTASE) [Arabidopsis thaliana]
159082	ATU021022	ATL8C11443:1..1977	gap2	ATCEA4S30954	88	ATL8C11443:691..1549	0.45	g3810592	45	733	4.9e-58	(AC005398) unknown protein [Arabidopsis thaliana]
159083	ATU021023	ATL8C18620:571..3966	gap2	ATCEA4S126, ATCEA4S11817	88, 85	ATL8C18620:571..1098	0.44	g4115361, g4646226	45, 40	257, 365	1.7e-22, 7.2e-39	(AC005957) hypothetical protein [Arabidopsis thaliana]; (AC007

												235) hypothetical protein [Arabidopsis thaliana]
159084	ATU021024	ATL8C39225:41..626	gap2	ATCEA4C14012_2	88	ATL8C39225:443..569	0.91	g2911047	44	527	5.3e-37	(AL021961) putative protein [Arabidopsis thaliana]
159085	ATU021025	ATL8C47169:1221..1	gap2	ATCEA4C22047_1, ATCEA4S18675	88, 88	ATL8C47169:916..129	0.87	g1711510	44	864	1.4e-94	SIGNAL RECOGNITION PARTICLE 54 KD PROTEIN 2 (SRP54) [Arabidopsis thaliana]
159086	ATU021026	ATL8C41534:721..92	gap2	ATCEA4C30193_1	88	ATL8C41534:603..108	0.47	g3451068	44	306	5.4e-20	(AL031326) putative protein [Arabi

												dopsis thaliana]
159087	ATU021027	ATL8C47017:480..1	gap2	ATCEA4C6684_1	88			g2739368	44	582	1.8e-69	(AC002505) cyclin-like protein [Arabidopsis thaliana]
159088	ATU021028	ATL8C46045:1..1052	gap2	ATCEA4C21054_1	88			g2244785	44	498	7.5e-46	(Z97335) hypothetical protein [Arabidopsis thaliana]
159089	ATU021029	ATL8C21369:224..1590	gap2	ATCEA4S1302	88	ATL8C21369:224..1376	0.79	g4512667	43	1049	1.4e-108	(AC006931) putative MAP kinase [Arabidopsis thaliana]
159090	ATU021030	ATL8C10981:1882..1	gap2	ATCEA4C9376_1	88			g3913289	43	310	1.9e-17	CAFFEIC ACID 3-O-METHYLTRANSFERASE (S-ADENOS

												YSL-L-METHIONINE:CAFFEIC ACID 3-O-METHYL TRANSFERASE) (COMT) [Clarkia brewer i]
159091	ATU021031	ATL8C9304:1153..3766	gap2	ATCEA4S4266	88	ATL8C9304:1918..3646	0.64	g2191187, g4455357	42, 39	443, 228	7.4e-63, 7.3e-22	(AF007271) contains similarity to a DNAJ-like domain [Arabidopsis thaliana]; (AL035524) putative protein [Arabidopsis thaliana]
159092	ATU021032	ATL8C1632:87	gap2	ATCEA4S178,	88, 87, 85	ATL8C1632:87	0.53, 0.54	g4773910	42	213	1.7e-18	(AF147259)

		7..3955		ATCEA4S11406, ATCEA4S253		7..2528, ATL8C1632:3891..3703						No definition line found [Arabidopsis thaliana]
159093	ATU021033	ATL8C6973:1..827	gap2	ATCEA4C31003_1	88			g1935914	42	877	6.5e-71	(U77347) lethal leaf-spot 1 homolog [Arabidopsis thaliana]
159094	ATU021034	ATL8C1319:5720..5362	gap2	ATCEA4S6272	88	ATL8C1319:5676..5362	0.99	g3150407	41	132	2.9e-13	(AC004165) hypothetical protein [Arabidopsis thaliana]
159095	ATU021035	ATL8C39513:3225..1	gap2	ATCEA4S203	88	ATL8C39513:3225..265	0.89	g3377816	41	1433	2.5e-185	(AF076275) contains similarity to Arabidopsis thalia

												na retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
159096	ATU021036	ATL8C36192:3632..4556	gap2	ATCEA4S7912, ATCEA4C29479_1	88, 86	ATL8C36192:3632..4454	0.88	g4432839	41	588	8.8e-48	(AC006283) unknown protein [Arabidopsis thaliana]
159097	ATU021037	ATL8S18677:1..747	gap2	ATCEA4C11456_1	88	ATL8S18677:393..688	0.93	g4006926	39	614	2.0e-53	(Z99708) putative protein (fragment) [Arabidopsis thaliana]
159098	ATU021038	ATL8C6443:1869..1	gap2	ATCEA4S5873	88	ATL8C6443:1567..420	0.77	g2281115	39	559	7.0e-40	(AC002330) putative cullin-like 1

												protein [Arabidopsis thaliana]
159099	ATU021039	ATL8C36725:5..1189	gap2	ATCEA4C34225_1	88	ATL8C36725:419..779	0.70	g3377803	39	845	4.4e-78	(AF075597) Similar to (p)ppGpp synthetase; T2H3.9 [Arabidopsis thaliana]
159100	ATU021040	ATL8S25137:241..1	gap2	ATCEA4C41311_1	88			g2734659	39	260	1.6e-21	(U48770) ribosomal protein subunit 2 [Chelone obliqua]
159101	ATU021041	ATL8C17216:983..1	gap2	ATCEA4S35495	88	ATL8C17216:904..14	0.91	g118493	38	524	3.6e-40	ALDEHYDE DEHYDROGENASE, CYTOSOLIC (CLASS 1)

												[Gallus gallus]
159102	ATU021042	ATL8C27894:1269..274	gap2	ATCEA4C24079_1	88	ATL8C27894:911..274	0.86	g3786005	38	578		(AC005499) putative phosphoethanolamine cytidylyltransferase [Arabidopsis thaliana]
159103	ATU021043	ATL8C2310:1357..1	gap2	ATCEA4C117498_1	88	ATL8C2310:1092..102	0.44	g1931641	38	654	7.2e-66	(U95973) unknown protein [Arabidopsis thaliana]
159104	ATU021044	ATL8C29068:1..613	gap2	ATCEA4S29875	88	ATL8C29068:219..597	0.64	g2935525	37	511	3.2e-53	(AF049067) cytochrome P450 [Pinus radiata]
159105	ATU021045	ATL8C27216:1	gap2	ATCEA4C52573	88	ATL8C27216:5	0.45	g2879800	37	186	1.1e-09	(AL021813)

		041..1		_1		86..324						phenylalanyl-trna synthetase alpha chain [Schizosaccharomyces pombe]
159106	ATU021046	ATL8C19162:1..1113	gap2	ATCEA4S31134	88			g2586083	37	576	8.9e-54	(U72725) receptor kinase-like protein [Oryza longistamina ta]
159107	ATU021047	ATL8C49825:4983..2419	gap2	ATCEA4S272	88	ATL8C49825:4433..2419	0.95	g2104683	36	369	7.4e-27	(X97908) transcription factor [Vicia faba]
159108	ATU021048	ATL8C14023:1..1305	gap2	ATCEA4C53580_1	88	ATL8C14023:61..1305	0.88	g2624002	36	50	0.14	(Z93941) YuxA [Bacillus subtilis]
159109	ATU021	ATL8C1	gap2	ATCEA4	88	ATL8C1	0.46	g19463	36	834		(U9321

	049	0648:2972..1		S35339		0648:2972..59		56				5) hypothetical protein H1.2flk [Arabidopsis thaliana]
159110	ATU021050	ATL8C41021:151..864	gap2	ATCEA4S27399	88	ATL8C41021:504..796	0.69	g4773908	34	681	3.6e-93	(AF147259) No definition line found [Arabidopsis thaliana]
159111	ATU021051	ATL8C207:2342..26	gap2	ATCEA4C86073_1	88			g4914463	34	172	2.1e-19	(AL050400) putative protein [Arabidopsis thaliana]
159112	ATU021052	ATL8C21297:1016..1	gap2	ATCEA4S31552, ATCEA4S31551	88, 84			g2244910	34	202	2.1e-10	(Z97339) unnamed protein product

												[Arabidopsis thaliana]
159113	ATU021053	ATL8C28358:838..400	gap2	ATCEA4S31339	88	ATL8C28358:837..585	0.74	g4512695	33	427	1.3e-27	(AC006569) unknown protein [Arabidopsis thaliana]
159114	ATU021054	ATL8C31719:144..2984	gap2	ATCEA4S34296	88	ATL8C31719:188..2980	0.46	g4567279	33	195	2.0e-14	(AC006841) putative serine/threonine protein kinase [Arabidopsis thaliana]
159115	ATU021055	ATL8C11605:281..630	gap2	ATCEA4S24288	88			g4468979	33	270	2.1e-25	(AL035605) putative protein [Arabidopsis thaliana]
159116	ATU021056	ATL8C35943:7	gap2	ATCEA4S2089	88			g4191774	33	391	4.7e-37	(AC005917)

		88..1										putative beta-1,3-endoglucanase [Arabidopsis thaliana]
159117	ATU021057	ATL8S21523:1..223	gap2	ATCEA4C3918_1	88			g1173241	33	70	3.8e-05	CHLOROPLAST 30S RIBOSOMAL PROTEIN S2 [Pinus thunbergii]
159118	ATU021058	ATL8C8112:1..1523	gap2	ATCEA4S1245	88	ATL8C8112:92..1413	0.72	g2864623	32	1757	7.7e-154	(AL021811) putative protein [Arabidopsis thaliana]
159119	ATU021059	ATL8C43422:1333..692	gap2	ATCEA4S1889	88	ATL8C43422:797..692	0.92	g99660	31	488		S-locus-specific glycoprotein SLR1 precursor -

												Arabidopsis thaliana [Arabidopsis thaliana]
159120	ATU021060	ATL8C21505:23..545	gap2	ATCEA4S35447	88	ATL8C21505:79..499	0.83	g4586112	31	715	2.7e-72	(AL049638) putative protein [Arabidopsis thaliana]
159121	ATU021061	ATL8C43336:1970..629	gap2	ATCEA4S344	88	ATL8C43336:1574..629	0.70	g3249077	31	93		(AC004473) Similar to prunasin hydrolase precursor gb|U50201 from Prunus serotina. ESTs gb|T21225 and gb|AA586305

												come from this gene. [Arabidopsis thaliana]
159122	ATU021062	ATL8S8744:1..649	gap2	ATCEA4C98_1	88			g4809007	31	370	2.2e-36	peroxidase (EC 1.11.1.7) - Arabidopsis thaliana [Arabidopsis thaliana]
159123	ATU021063	ATL8C35421:1375..1	gap2	ATCEA4S11716, ATCEA4C3622_1	88, 83	ATL8C35421:1054..304	0.65	g4850384	30	132	6.1e-11	(AC007357) F3F19.3 [Arabidopsis thaliana]
159124	ATU021064	ATL8S30875:1..497	gap2	ATCEA4S4832, ATCEA4C37_1	88, 88			g2499236	30	397	4.2e-26	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN 1, CHLOROPLAST

												[Arabidopsis thaliana]
159125	ATU021065	ATL8C33007:1..774	gap2	ATCEA4C116807_1	88	ATL8C33007:133..774	0.97					
159126	ATU021066	ATL8C44153:66..1016	gap2	ATCEA4S34404	88	ATL8C44153:66..1016	0.96					
159127	ATU021067	ATL8S13570:1..474	gap2	ATCEA4C18046_1, ATCEA4S2418	88, 86	ATL8S13570:101..321	0.96					
159128	ATU021068	ATL8C16702:3755..2226	gap2	ATCEA4C64911_1, ATCEA4C69646_1	88, 87	ATL8C16702:3703..2568	0.95					
159129	ATU021069	ATL8C17135:276..969	gap2	ATCEA4C197_1	88	ATL8C17135:367..944	0.95					
159130	ATU021070	ATL8C26894:712..61	gap2	ATCEA4C81763_1	88	ATL8C26894:712..63	0.94					
159131	ATU021071	ATL8C40019:581..1	gap2	ATCEA4C83662_1	88	ATL8C40019:581..61	0.94					
159132	ATU021072	ATL8S20924:1..302	gap2	ATCEA4C22464_1	88	ATL8S20924:187..302	0.94					
159133	ATU021073	ATL8C46903:163..77	gap2	ATCEA4C5147_1	88	ATL8C46903:638..72	0.94					

		4				4						
159134	ATU021074	ATL8C40823:196..1	gap2	ATCEA4C7730_3, ATCEA4S8063	88, 87	ATL8C40823:151..37	0.93					
159135	ATU021075	ATL8C13449:365..2628	gap2	ATCEA4S12924	88	ATL8C13449:792..2628	0.93					
159136	ATU021076	ATL8C5512:69..1610	gap2	ATCEA4S15267	88	ATL8C5512:69..1489	0.93					
159137	ATU021077	ATL8C10242:428..2053	gap2	ATCEA4C13713_1	88	ATL8C10242:434..2053	0.92					
159138	ATU021078	ATL8C32345:1560..3786	gap2	ATCEA4S12800, ATCEA4C7360_1	88, 87	ATL8C32345:1939..3786	0.92					
159139	ATU021079	ATL8S3902:402..1	gap2	ATCEA4C32958_1	88	ATL8S3902:188..57	0.92					
159140	ATU021080	ATL8C5225:1766..1331	gap2	ATCEA4S203	88	ATL8C5225:1656..1331	0.91					
159141	ATU021081	ATL8C40344:309..1124	gap2	ATCEA4C527_1	88	ATL8C40344:309..1124	0.91					
159142	ATU021082	ATL8C24463:368..1	gap2	ATCEA4S5326	88	ATL8C24463:310..86	0.91					
159143	ATU021083	ATL8C18634:73..768	gap2	ATCEA4C59730_1	88	ATL8C18634:757..40	0.91					

						6						
159144	ATU0210084	ATL8C8591:520..38	gap2	ATCEA4C27388_1	88	ATL8C8591:304..38	0.90					
159145	ATU0210085	ATL8C45103:989..1	gap2	ATCEA4C9308_1	88	ATL8C45103:955..76	0.90					
159146	ATU0210086	ATL8C34715:1250..221	gap2	ATCEA4S28649	88	ATL8C34715:1250..226	0.90					
159147	ATU0210087	ATL8C8600:819..173	gap2	ATCEA4S163	88	ATL8C8600:741..173	0.90					
159148	ATU0210088	ATL8C41097:83..653	gap2	ATCEA4C74068_3, ATCEA4C74068_1	88, 87	ATL8C41097:123..638	0.89					
159149	ATU0210089	ATL8S13533:471..207	gap2	ATCEA4C28651_1	88	ATL8S13533:457..362	0.89					
159150	ATU0210090	ATL8C42776:291..1	gap2	ATCEA4S36261	88	ATL8C42776:234..58	0.89					
159151	ATU0210091	ATL8C40043:127..580	gap2	ATCEA4C33823_1	88	ATL8C40043:169..579	0.89					
159152	ATU0210092	ATL8S1019:10..662	gap2	ATCEA4C23260_2	88	ATL8S1019:10..477	0.89					
159153	ATU0210093	ATL8C10116:889..1162	gap2	ATCEA4C5980_1	88	ATL8C10116:969..1162	0.88					
159154	ATU0210094	ATL8S30436:3	gap2	ATCEA4C7858	88	ATL8S30436:3	0.88					

		78..52		1		78..52						
159155	ATU021095	ATL8C8972:735..20	gap2	ATCEA4C34137_1, ATCEA4S26646	88, 83	ATL8C8972:686..20	0.87					
159156	ATU021096	ATL8C46603:201..1314	gap2	ATCEA4S36078, ATCEA4S1223	88, 82	ATL8C46603:252..1131	0.87					
159157	ATU021097	ATL8C39090:679..1	gap2	ATCEA4S2142	88	ATL8C39090:679..110	0.87					
159158	ATU021098	ATL8C47203:1..1010	gap2	ATCEA4C4029_1	88	ATL8C47203:232..1010	0.87					
159159	ATU021099	ATL8S1530:1..484	gap2	ATCEA4C5960_1	88	ATL8S1530:158..276	0.86					
159160	ATU021100	ATL8C46733:91..644	gap2	ATCEA4S2640	88	ATL8C46733:91..492	0.86					
159161	ATU021101	ATL8C36337:1788..6918	gap2	ATCEA4S35562, ATCEA4C32660_1	87, 84	ATL8C36337:1788..6918	0.86	g1706130	100	1701	1.9e-170	CDPK-RELATED PROTEIN KINASE (PK421) [Daucus carota]
159162	ATU021102	ATL8C47488:1..564	gap2	ATCEA4C125761_1	88	ATL8C47488:106..56	0.85					

						4						
159163	ATU021103	ATL8C35107:7138..1284	gap2	ATCEA4S344	87	ATL8C35107:7138..1357	0.85	g4263544	100	3479	0.0	(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
159164	ATU021104	ATL8C42795:1064..807	gap2	ATCEA4S13634	88	ATL8C42795:908..822	0.85					
159165	ATU021105	ATL8S24579:150..599	gap2	ATCEA4S31263	88	ATL8S24579:150..579	0.85					
159166	ATU021106	ATL8C25774:1910..174	gap2	ATCEA4C28525_1	88	ATL8C25774:1896..174	0.84					
159167	ATU021107	ATL8C49388:244..1006	gap2	ATCEA4S3210, ATCEA4S15268	88, 83	ATL8C49388:244..1006	0.84					
159168	ATU021108	ATL8C26028:109..967	gap2	ATCEA4S16626, ATCEA4S3017, ATCEA4C24346_1	88, 86, 84	ATL8C26028:109..904	0.84					
159169	ATU021	ATL8C2	gap2	ATCEA4	88	ATL8C2	0.84					

	109	8472:1 325..2 20		S35959		8472:1 125..2 20						
159170	ATU021 110	ATL8C2 8958:1 454..3 43	gap2	ATCEA4 C55907 _1	88	ATL8C2 8958:1 454..3 43	0.82					
159171	ATU021 111	ATL8C4 2572:6 52..1	gap2	ATCEA4 C254_1	88	ATL8C4 2572:2 94..14 4	0.82					
159172	ATU021 112	ATL8C4 8312:2 4..180 6	gap2	ATCEA4 S32642	87	ATL8C4 8312:2 52..18 06	0.81	g31526 66	100	169	6.6e-12	(AF064 606) KB07 protei n [Homo sapien s]
159173	ATU021 113	ATL8C4 3937:1 660..6 86	gap2	ATCEA4 S4951	88	ATL8C4 3937:1 660..6 93	0.81					
159174	ATU021 114	ATL8C2 8189:6 26..10 83	gap2	ATCEA4 S7	88	ATL8C2 8189:6 26..75 0	0.80					
159175	ATU021 115	ATL8C3 4078:1 51..17 35	gap2	ATCEA4 S35989	88	ATL8C3 4078:1 51..15 14	0.80					
159176	ATU021 116	ATL8C2 4836:1 ..1841	gap2	ATCEA4 S1217	88	ATL8C2 4836:1 13..18 41	0.80					
159177	ATU021 117	ATL8C2 3577:2 944..1 609	gap2	ATCEA4 S5996	88	ATL8C2 3577:2 944..1 609	0.79					
159178	ATU021	ATL8C3	gap2	ATCEA4	88, 84	ATL8C3	0.79					

	118	0848:432..1248		C13843 8_1, ATCEA4 S4904		0848:710..1248						
159179	ATU021 119	ATL8C1 7758:177..1842	gap2	ATCEA4 S8053	88	ATL8C1 7758:177..1842	0.79					
159180	ATU021 120	ATL8C4 345:144..1094	gap2	ATCEA4 S10838	88	ATL8C4 345:144..1094	0.79					
159181	ATU021 121	ATL8S1 64:465..88	gap2	ATCEA4 S81	88	ATL8S1 64:403..88	0.78					
159182	ATU021 122	ATL8C3 8525:12..2645	gap2	ATCEA4 S25930	88	ATL8C3 8525:12..2535	0.78					
159183	ATU021 123	ATL8S1 0193:348..1	gap2	ATCEA4 S24949, ATCEA4 S32383, ATCEA4 S24950	88, 83, 82	ATL8S1 0193:302..110	0.78					
159184	ATU021 124	ATL8S5 739:498..18	gap2	ATCEA4 S1911	88	ATL8S5 739:498..137	0.77					
159185	ATU021 125	ATL8C9 47:1408..4061	gap2	ATCEA4 C7895_1	87	ATL8C9 47:1408..4052	0.77	g3021279	100	2441	7.3e-227	(AL022347) serine/threonine kinase [Arabidopsis thaliana]

159186	ATU021126	ATL8C10878:241..1520	gap2	ATCEA4S34308	88	ATL8C10878:241..1056	0.77					
159187	ATU021127	ATL8C17259:400..1970	gap2	ATCEA4S6095	88	ATL8C17259:412..1970	0.76					
159188	ATU021128	ATL8C20276:25..2003	gap2	ATCEA4C3118_1, ATCEA4S4979	88, 85	ATL8C20276:25..2003	0.76					
159189	ATU021129	ATL8C40682:141..2014	gap2	ATCEA4C43988_1	88	ATL8C40682:141..2014	0.75					
159190	ATU021130	ATL8C13562:3644..387	gap2	ATCEA4S178, ATCEA4S253	87, 86	ATL8C13562:3548..387	0.75	g3047093, g4038066	100, 100	1124, 594	3.8e-97, 1.8e-39	(AF058826) T26D22.5 gene product [Arabidopsis thaliana]; (AC005897) hypothetical protein [Arabidopsis thaliana]
159191	ATU021131	ATL8C31878:3	gap2	ATCEA4S32756	87	ATL8C31878:3	0.74	g4850403	100	1955	6.9e-198	(AC007357)

		326..116				326..211						F3F19.23 [Arabidopsis thaliana]
159192	ATU021132	ATL8C4149:3709..1065	gap2	ATCEA4S9932	87	ATL8C4149:3623..1065	0.72	g82260	100	789	4.8e-68	alcohol dehydrogenase (EC 1.1.1.1) 1 - potato [Solanum tuberosum]
159193	ATU021133	ATL8C14167:1..372	gap2	ATCEA4C706_1	88	ATL8C14167:280..372	0.72					
159194	ATU021134	ATL8S17688:82..571	gap2	ATCEA4S304	88	ATL8S17688:82..311	0.70					
159195	ATU021135	ATL8C996:161..899	gap2	ATCEA4S178, ATCEA4S253	88, 86	ATL8C996:241..899	0.70					
159196	ATU021136	ATL8C7770:1..462	gap2	ATCEA4S27110	88	ATL8C7770:180..224	0.70					
159197	ATU021137	ATL8C21653:212..479	gap2	ATCEA4C5429_1	88	ATL8C21653:212..479	0.69					
159198	ATU021138	ATL8C38635:1300..15	gap2	ATCEA4S7419	88	ATL8C38635:1272..15	0.67					

159199	ATU021139	ATL8C4893:478..809	gap2	ATCEA4C488541	88	ATL8C4893:524..799	0.67					
159200	ATU021140	ATL8C39317:74..234	gap2	ATCEA4S253	88	ATL8C39317:165..234	0.66					
159201	ATU021141	ATL8C23557:1384..67	gap2	ATCEA4C21211_1	88	ATL8C23557:1330..67	0.66					
159202	ATU021142	ATL8S4663:579..1	gap2	ATCEA4C6766_1, ATCEA4S1664	88, 86	ATL8S4663:535..167	0.65					
159203	ATU021143	ATL8C46188:523..1	gap2	ATCEA4C127629 1	88	ATL8C46188:523..57	0.65					
159204	ATU021144	ATL8C41118:815..1	gap2	ATCEA4C7382_1	88	ATL8C41118:770..148	0.65					
159205	ATU021145	ATL8C312:1..710	gap2	ATCEA4C124171	88	ATL8C312:243..710	0.65					
159206	ATU021146	ATL8C8008:6274..1	gap2	ATCEA4S485	88	ATL8C8008:6274..569	0.65					
159207	ATU021147	ATL8C45235:677..1	gap2	ATCEA4C348_1, ATCEA4S34885	88, 86	ATL8C45235:357..143	0.65					
159208	ATU021148	ATL8C17333:1802..147	gap2	ATCEA4S1378	88	ATL8C17333:1802..147	0.64					
159209	ATU021	ATL8C1	gap2	ATCEA4	87,	ATL8C1	0.64	g21300	100	1752	6.4e-	protei

	149	9155:149..3546		C11851 7_1, ATCEA4 S31134, ATCEA4 S27726	87, 83	9155:161..3281		82			174	n kinase Xa21 (EC 2.7.1.-) - rice [Oryza sativa]
159210	ATU021 150	ATL8C2 0893:703..101	gap2	ATCEA4 S34970	88	ATL8C2 0893:703..101	0.64					
159211	ATU021 151	ATL8C4 1741:1..358	gap2	ATCEA4 S81	88	ATL8C4 1741:283..358	0.63					
159212	ATU021 152	ATL8C2 1230:52..737	gap2	ATCEA4 C1806_1	88	ATL8C2 1230:52..494	0.63					
159213	ATU021 153	ATL8C1 0426:489..1352	gap2	ATCEA4 S32888, ATCEA4 S36013, ATCEA4 S12529	88, 85, 82	ATL8C1 0426:555..1352	0.62					
159214	ATU021 154	ATL8C4 8880:1..966	gap2	ATCEA4 S3154	88	ATL8C4 8880:352..966	0.62					
159215	ATU021 155	ATL8C3 6489:2023..1085	gap2	ATCEA4 S26274	88	ATL8C3 6489:2023..1332	0.60					
159216	ATU021 156	ATL8C2 1678:65..758	gap2	ATCEA4 C151649 1	88	ATL8C2 1678:65..606	0.60					

159217	ATU021157	ATL8C49003:1..1718	gap2	ATCEA4C6413_1	88	ATL8C49003:63..1718	0.59					
159218	ATU021158	ATL8C6699:170..585	gap2	ATCEA4S32033	88	ATL8C6699:170..364	0.58					
159219	ATU021159	ATL8C9682:420..1084	gap2	ATCEA4S11991, ATCEA4S26349	88, 86	ATL8C9682:463..525	0.57					
159220	ATU021160	ATL8C7802:1..625	gap2	ATCEA4C2731_1, ATCEA4S6649	88, 85	ATL8C7802:295..455	0.57					
159221	ATU021161	ATL8C48332:58..1129	gap2	ATCEA4C58105_1	88	ATL8C48332:58..1129	0.57					
159222	ATU021162	ATL8C33693:888..10	gap2	ATCEA4C116167_1	88	ATL8C33693:850..10	0.57					
159223	ATU021163	ATL8C24384:86..633	gap2	ATCEA4S5903	88	ATL8C24384:86..604	0.56					
159224	ATU021164	ATL8S18060:584..1	gap2	ATCEA4S1879	88	ATL8S18060:584..11	0.56					
159225	ATU021165	ATL8C7619:1..491	gap2	ATCEA4S178, ATCEA4S253	88, 86	ATL8C7619:422..491	0.55					
159226	ATU021166	ATL8C13950:11452..83	gap2	ATCEA4S3979	87	ATL8C13950:11150..382	0.55	g4733992, g3319360, g4914361,	100, 100, 63, 30	2352, 3452, 2347, 118	2.1e-239, 3.1e-238, 3.3e-244,	(AC007188) putative polyprotein

								g3319352			1.7e-05	[Arabidopsis thaliana]; (AF077408) contains similarity to Vicia faba retrotransposon-like gene (GB:AB007467) [Arabidopsis thaliana]; (AC007289) putative reverse transcriptase [Arabidopsis thaliana]; (AF077407)

												No definition line found [Arabidopsis thaliana]
159227	ATU021167	ATL8C30330:1829..1431	gap2	ATCEA4C4045_1, ATCEA4S9612	88, 87	ATL8C30330:1829..1515	0.54					
159228	ATU021168	ATL8C25169:1317..118	gap2	ATCEA4S5509	88	ATL8C25169:1294..187	0.53					
159229	ATU021169	ATL8C39263:1497..3534	gap2	ATCEA4S11082	87	ATL8C39263:1497..3534	0.53	g3695396	100	2310	2.3e-198	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
159230	ATU021	ATL8C1	gap2	ATCEA4	88	ATL8C1	0.53					

	170	3120:81..660		C6800_1		3120:81..604						
159231	ATU021171	ATL8C22764:520..70	gap2	ATCEA4S18022	88	ATL8C22764:228..70	0.53					
159232	ATU021172	ATL8C31989:175..666	gap2	ATCEA4S14646	88	ATL8C31989:251..570	0.52					
159233	ATU021173	ATL8C19280:432..846	gap2	ATCEA4S13318	88	ATL8C19280:445..846	0.52					
159234	ATU021174	ATL8C5324:407..1186	gap2	ATCEA4S8566	88	ATL8C5324:407..1186	0.52					
159235	ATU021175	ATL8S26215:1..556	gap2	ATCEA4S3675	88	ATL8S26215:143..556	0.51					
159236	ATU021176	ATL8C19337:239..1135	gap2	ATCEA4S35812	88	ATL8C19337:239..666	0.51					
159237	ATU021177	ATL8S26209:269..340	gap2	ATCEA4S29652	88	ATL8S26209:340..269	0.50					
159238	ATU021178	ATL8C49903:2962..6030	gap2	ATCEA4S178	88	ATL8C49903:2962..6030	0.50					
159239	ATU021179	ATL8C30993:209..1849	gap2	ATCEA4S27385	87	ATL8C30993:309..1848	0.48	g2660673	100	1936	3.8e-192	(AC002342) unknown protein [Arabi

												dopsis thaliana]
159240	ATU021180	ATL8C13468:120..259	gap2	ATCEA4S1305	88	ATL8C13468:120..259	0.48					
159241	ATU021181	ATL8C31803:483..1	gap2	ATCEA4C1401_2	88	ATL8C31803:318..216	0.47					
159242	ATU021182	ATL8C112:2033..116	gap2	ATCEA4S3944	88	ATL8C112:2033..726	0.47					
159243	ATU021183	ATL8C36160:467..1104	gap2	ATCEA4S13333	88	ATL8C36160:467..893	0.46					
159244	ATU021184	ATL8C46564:9132..4316	gap2	ATCEA4S11082	87	ATL8C46564:6142..4706, ATL8C46564:7551..6998, ATL8C46564:8802..7845	0.46, 0.97, 0.60	g4325348, g3047073	100, 75	1977, 1686	2.8e-162, 2.3e-137	(AF128394) contains similarity to phosphate transporters [Arabidopsis thaliana]; (AF058825) contains similarity to

												retrotranspo son-like proteins [Arabidopsis thaliana]
159245	ATU021185	ATL8C31805:3282..36	gap2	ATCEA4S7640	88	ATL8C31805:3282..36	0.45					
159246	ATU021186	ATL8C31928:357..2934	gap2	ATCEA4S32521	88	ATL8C31928:357..2934	0.45					
159247	ATU021187	ATL8C46717:796..128	gap2	ATCEA4S11618	88	ATL8C46717:796..128	0.45					
159248	ATU021188	ATL8S20524:1..100	gap2	ATCEA4C226811	88	ATL8S20524:34..100	0.45					
159249	ATU021189	ATL8C11976:726..80	gap2	ATCEA4C151062_1	88	ATL8C11976:720..270	0.44					
159250	ATU021190	ATL8C49917:189..6009	gap2	ATCEA4C48483_1	87	ATL8C49917:273..6009	0.44	g4582455, g3445211	100, 79	388, 276	1.8e-38, 2.4e-12	(AC007071) putative receptor protein kinase [Arabidopsis

												thaliana]; (AC004786) hypothetical protein [Arabidopsis thaliana]
159251	ATU021191	ATL8C43373:896..168	gap2	ATCEA4C22178_1, ATCEA4C5775_2, ATCEA4C5775_1	88, 88, 83	ATL8C43373:884..168	0.44					
159252	ATU021192	ATL8C19565:4157..190	gap2	ATCEA4C42331_1	87	ATL8C19565:4015..190	0.43	g3319360, g3319352	100, 55	2661, 425	8.8e-279, 7.0e-36	(AF077408) contains similarity to Vicia faba retrotranspo son-like gene (GB:AB007467) [Arabidopsis

												thaliana]; (AF077407) No definition line found [Arabidopsis thaliana]
159253	ATU021193	ATL8C1275:1392..325	gap2	ATCEA4C119308_1	87	ATL8C1275:1191..588	0.43	g4586245	100	560	2.4e-53	(AL049640) putative protein [Arabidopsis thaliana]
159254	ATU021194	ATL8C30169:1..385	gap2	ATCEA4S34271	88	ATL8C30169:19..85	0.41					
159255	ATU021195	ATL8S28337:471..1	gap2	ATCEA4S389	88	ATL8S28337:337..198	0.41					
159256	ATU021196	ATL8S1406:1..527	gap2	ATCEA4C3399_1	88							
159257	ATU021197	ATL8S10814:76..1	gap2	ATCEA4S29562	88							
159258	ATU021198	ATL8C2612:1..134	gap2	ATCEA4S27393	88							
159259	ATU021	ATL8C2	gap2	ATCEA4	88							

	199	2647:1010..1167		C5485_1								
159260	ATU021200	ATL8C36709:514..842	gap2	ATCEA4S2003	88							
159261	ATU021201	ATL8C30186:578..1015	gap2	ATCEA4S23588	88							
159262	ATU021202	ATL8C40672:648..325	gap2	ATCEA4S4752	88							
159263	ATU021203	ATL8C20761:356..6	gap2	ATCEA4S11406	88							
159264	ATU021204	ATL8S109:417..44	gap2	ATCEA4S12237	88							
159265	ATU021205	ATL8C18505:3782..3684	gap2	ATCEA4S14615, ATCEA4C653_1, ATCEA4S35142	88, 87, 85							
159266	ATU021206	ATL8S3394:305..1	gap2	ATCEA4S32628	88							
159267	ATU021207	ATL8S11056:387..447	gap2	ATCEA4S36361	88							
159268	ATU021208	ATL8C45749:545..212	gap2	ATCEA4C22615_1, ATCEA4	88, 84							

				S20985								
159269	ATU0212 09	ATL8C20862:1251..613	gap2	ATCEA4S11306, ATCEA4S114	88, 82							
159270	ATU0212 10	ATL8C42010:791..1	gap2	ATCEA4S3937, ATCEA4S11406	88, 85							
159271	ATU0212 11	ATL8C24651:923..1019	gap2	ATCEA4C1985_1	88							
159272	ATU0212 12	ATL8C15023:262..327	gap2	ATCEA4C64837_1	88							
159273	ATU0212 13	ATL8C26216:1752..993	gap2	ATCEA4C80764_1	88							
159274	ATU0212 14	ATL8S11231:288..1	gap2	ATCEA4S34772	88							
159275	ATU0212 15	ATL8S3465:376..539	gap2	ATCEA4C66867_1	88							
159276	ATU0212 16	ATL8C22467:375..786	gap2	ATCEA4S25309	88							
159277	ATU0212 17	ATL8C47330:1862..2166	gap2	ATCEA4S393	88							
159278	ATU0212 18	ATL8C2327:843..1315	gap2	ATCEA4C29834_1	88							

159279	ATU0219	ATL8S1256:91..1	gap2	ATCEA4S35993	88							
159280	ATU0220	ATL8S3607:436..329	gap2	ATCEA4S11337	88							
159281	ATU0221	ATL8C23383:315..737	gap2	ATCEA4C11543_1	88							
159282	ATU0222	ATL8C22394:549..214	gap2	ATCEA4S11326	88							
159283	ATU0223	ATL8C35917:126..654	gap2	ATCEA4S35026	88							
159284	ATU0224	ATL8S5071:149..1	gap2	ATCEA4S18309,ATCEA4S23321	88, 88							
159285	ATU0225	ATL8C24122:627..230	gap2	ATCEA4S13054	88							
159286	ATU0226	ATL8C50075:2281..1864	gap2	ATCEA4S12955,ATCEA4S12982	88, 83							
159287	ATU0227	ATL8C46260:1790..2635	gap2	ATCEA4C8248_1,ATCEA4S27218	88, 85							
159288	ATU0228	ATL8C17310:1098..3	gap2	ATCEA4S7212	88							

		96										
159289	ATU0212 29	ATL8C35990:1016..348	gap2	ATCEA4S17858	88							
159290	ATU0212 30	ATL8C91:798..1	gap2	ATCEA4S34368	88							
159291	ATU0212 31	ATL8S3771:147..1	gap2	ATCEA4S36387	88							
159292	ATU0212 32	ATL8C28241:61..139	gap2	ATCEA4S19122	88							
159293	ATU0212 33	ATL8C15527:3576..3727	gap2	ATCEA4C136129_1	88							
159294	ATU0212 34	ATL8C34996:1260..1414	gap2	ATCEA4C9701_1	88							
159295	ATU0212 35	ATL8C40517:1031..125	gap2	ATCEA4C9954_1	88							
159296	ATU0212 36	ATL8S402:178..38	gap2	ATCEA4S14953	88							
159297	ATU0212 37	ATL8C1081:1387..1587	gap2	ATCEA4S31833	88							
159298	ATU0212 38	ATL8C3805:86..543	gap2	ATCEA4S5890	88							
159299	ATU0212 39	ATL8C2589:954..738	gap2	ATCEA4C46964_1	88							

159300	ATU0212240	ATL8S11519:97..35	gap2	ATCEA4C579321	88							
159301	ATU0212241	ATL8S13234:394..1	gap2	ATCEA4C605_1, ATCEA4S14313	88, 87							
159302	ATU0212242	ATL8C2943:942..341	gap2	ATCEA4S15590	88							
159303	ATU0212243	ATL8S4623:236..34	gap2	ATCEA4S321	88							
159304	ATU0212244	ATL8C47657:1..352	gap2	ATCEA4S36131	88							
159305	ATU0212245	ATL8S30143:185..1	gap2	ATCEA4C20086_2	88							
159306	ATU0212246	ATL8S3377:663..123	gap2	ATCEA4S1209, ATCEA4S26242	88, 85							
159307	ATU0212247	ATL8C8659:331..647	gap2	ATCEA4S26895	88							
159308	ATU0212248	ATL8C40437:122..397	gap2	ATCEA4S26226	88							
159309	ATU0212249	ATL8C18203:97..333	gap2	ATCEA4S3610	88							
159310	ATU0212250	ATL8C41551:176..1	gap2	ATCEA4S10902	88							
159311	ATU0212251	ATL8C30357:427..58	gap2	ATCEA4S6729	88							

		2										
159312	ATU0212 52	ATL8C20266:1..355	gap2	ATCEA4S35218	88							
159313	ATU0212 53	ATL8S29624:1..241	gap2	ATCEA4S22568, ATCEA4C942_1	88, 86							
159314	ATU0212 54	ATL8C42255:151..290	gap2	ATCEA4C11614_1	88							
159315	ATU0212 55	ATL8S12087:137..28	gap2	ATCEA4S15999	88							
159316	ATU0212 56	ATL8C20878:1380..912	gap2	ATCEA4C16900_1	88							
159317	ATU0212 57	ATL8C40377:872..951	gap2	ATCEA4C11211_3	88							
159318	ATU0212 58	ATL8C20919:4259..4093	gap2	ATCEA4S3087	88							
159319	ATU0212 59	ATL8C32776:2031..1501	gap2	ATCEA4S36117, ATCEA4S23952	88, 82							
159320	ATU0212 60	ATL8C47805:86..1	gap2	ATCEA4S3151	88							
159321	ATU0212 61	ATL8C41758:103..311	gap2	ATCEA4S3937	88							

159322	ATU021262	ATL8C18049:764..1321	gap2	ATCEA4C101778_1, ATCEA4S24973	88, 82							
159323	ATU021263	ATL8C34486:1..273	gap2	ATCEA4C5036_1	88							
159324	ATU021264	ATL8C28505:497..746	gap2	ATCEA4C19753_1	88							
159325	ATU021265	ATL8C47825:2424..1967	gap2	ATCEA4S14982	88							
159326	ATU021266	ATL8S52:697..522	gap2	ATCEA4C11442_1	88							
159327	ATU021267	ATL8C41831:1..277	gap2	ATCEA4S33216	88							
159328	ATU021268	ATL8C22983:1327..755	gap2	ATCEA4S18844	88							
159329	ATU021269	ATL8S27219:121..1	gap2	ATCEA4C36522_1	88							
159330	ATU021270	ATL8C18028:459..1	gap2	ATCEA4S81	88							
159331	ATU021271	ATL8S1241:531..602	gap2	ATCEA4C80102_1	88							
159332	ATU021272	ATL8C14898:1026..1278	gap2	ATCEA4S12012	88							
159333	ATU021	ATL8C4	gap2	ATCEA4	88							

	273	074:21 89..20 50		S253								
159334	ATU021 274	ATL8C4 7739:1 608..2 390	gap2	ATCEA4 C22942 _1, ATCEA4 S13962 , ATCEA4 S20903	88, 86, 85							
159335	ATU021 275	ATL8C1 1671:1 ..229	gap2	ATCEA4 S20272	88							
159336	ATU021 276	ATL8S1 2433:1 47..1	gap2	ATCEA4 S1722	88							
159337	ATU021 277	ATL8C7 657:1. .448	gap2	ATCEA4 C23960 _1	88							
159338	ATU021 278	ATL8C4 078:59 9..237	gap2	ATCEA4 S126	88							
159339	ATU021 279	ATL8C1 4743:5 956..5 720	gap2	ATCEA4 S11581	88							
159340	ATU021 280	ATL8C2 4356:4 959..4 603	gap2	ATCEA4 S11406	88							
159341	ATU021 281	ATL8C1 5364:9 40..72 9	gap2	ATCEA4 S10977	88							
159342	ATU021 282	ATL8C3 0259:1 89..1	gap2	ATCEA4 S17747	88							
159343	ATU021 283	ATL8C1 1238:2	gap2	ATCEA4 C90140	88							

		363..2913		_1								
159344	ATU0212284	ATL8C764:1..266	gap2	ATCEA4C136626_1	88							
159345	ATU0212285	ATL8C7542:681..230	gap2	ATCEA4S30755	88							
159346	ATU0212286	ATL8C3364:769..414	gap2	ATCEA4S13054	88							
159347	ATU0212287	ATL8C33041:2859..2449	gap2	ATCEA4C148442_1	88							
159348	ATU0212288	ATL8C26048:1008..1494	gap2	ATCEA4C84402_1	88							
159349	ATU0212289	ATL8C42228:348..1	gap2	ATCEA4S12536	88							
159350	ATU0212290	ATL8S7390:253..1	gap2	ATCEA4S24056	88							
159351	ATU0212291	ATL8C28140:385..713	gap2	ATCEA4S13072	88							
159352	ATU0212292	ATL8S31000:177..88	gap2	ATCEA4C2988_1	88							
159353	ATU0212293	ATL8S2207:521..273	gap2	ATCEA4S27324,ATCEA4S25809	88, 88							
159354	ATU0212294	ATL8C2599:255..726	gap2	ATCEA4S7451	88							

159355	ATU0212295	ATL8C21479:547..481	gap2	ATCEA4C928_2	88							
159356	ATU0212296	ATL8C31032:1..468	gap2	ATCEA4S33808	88							
159357	ATU0212297	ATL8C16290:5363..5232	gap2	ATCEA4C149862_1	88							
159358	ATU0212298	ATL8C23586:1253..1167	gap2	ATCEA4S4359	88							
159359	ATU0212299	ATL8C42380:1..318	gap2	ATCEA4S178	88							
159360	ATU0212300	ATL8C37474:1656..1784	gap2	ATCEA4S2198	88							
159361	ATU0212301	ATL8C2318:1266..1512	gap2	ATCEA4S3610	88							
159362	ATU0212302	ATL8S13079:567..166	gap2	ATCEA4S2593	88							
159363	ATU0212303	ATL8C43369:1..381	gap2	ATCEA4S24861,ATCEA4C737781	88, 82							
159364	ATU0212304	ATL8C16367:2152..1894	gap2	ATCEA4S7536	88							

159365	ATU021305	ATL8C7147:965..1266	gap2	ATCEA4S10964	88							
159366	ATU021306	ATL8S10722:90..1	gap2	ATCEA4S35993	88							
159367	ATU021307	ATL8C9786:534..673	gap2	ATCEA4S253	88							
159368	ATU021308	ATL8S5068:278..1	gap2	ATCEA4C852_1	88							
159369	ATU021309	ATL8C37279:1439..1168	gap2	ATCEA4S23960	88							
159370	ATU021310	ATL8C13975:2839..2471	gap2	ATCEA4S203	88							
159371	ATU021311	ATL8S8609:413..75	gap2	ATCEA4S36344	88							
159372	ATU021312	ATL8C42760:1016..421	gap2	ATCEA4C143305_1	88							
159373	ATU021313	ATL8C42768:3514..3887	gap2	ATCEA4S344	88							
159374	ATU021314	ATL8C34229:1153..1642	gap2	ATCEA4S3937	88							
159375	ATU021315	ATL8C11274:815..1723	gap2	ATCEA4S178	87			g4038066	100	420	2.5e-10	(AC005897) hypothetical

												protein [Arabidopsis thaliana]
159376	ATU0213 16	ATL8C14852:1392..887	gap2	ATCEA4C117878_1	88							
159377	ATU0213 17	ATL8C9717:1477..998	gap2	ATCEA4S32578	88							
159378	ATU0213 18	ATL8C16380:1592..1932	gap2	ATCEA4S12209	88							
159379	ATU0213 19	ATL8C31284:1..261	gap2	ATCEA4S26343	88							
159380	ATU0213 20	ATL8C7567:8251..8024	gap2	ATCEA4C40831_1	88							
159381	ATU0213 21	ATL8C9675:2477..2832	gap2	ATCEA4S29854	88							
159382	ATU0213 22	ATL8C38347:1902..1306	gap2	ATCEA4S14585	88							
159383	ATU0213 23	ATL8C211:422..329	gap2	ATCEA4C35742_1, ATCEA4C304251	88, 83							
159384	ATU021	ATL8C1	gap2	ATCEA4	88, 83							

	324	0343:1..193		C33803_1, ATCEA4S23317								
159385	ATU021325	ATL8C6985:246..645	gap2	ATCEA4C93177_1	88							
159386	ATU021326	ATL8S3150:412..1	gap2	ATCEA4C3350_1, ATCEA4S3045, ATCEA4S13972, ATCEA4S12038	88, 87, 84, 83							
159387	ATU021327	ATL8C26116:709..213	gap2	ATCEA4S35517	88							
159388	ATU021328	ATL8C674:1373..933	gap2	ATCEA4S17122	88							
159389	ATU021329	ATL8C1086:445..131	gap2	ATCEA4S25913	88							
159390	ATU021330	ATL8C40663:1..82	gap2	ATCEA4S35213	88							
159391	ATU021331	ATL8C31244:186..655	gap2	ATCEA4C81285_1	88							
159392	ATU021332	ATL8C30401:27..711	gap2	ATCEA4C2625_1	88							
159393	ATU021333	ATL8C9424:235..820	gap2	ATCEA4S33714	88							

159394	ATU021334	ATL8C21368:32..386	gap2	ATCEA4S1765	88							
159395	ATU021335	ATL8C5430:3090..2917	gap2	ATCEA4S24645	88							
159396	ATU021336	ATL8S14132:1..238	gap2	ATCEA4S11406	88							
159397	ATU021337	ATL8C43089:439..820	gap2	ATCEA4S10452	88							
159398	ATU021338	ATL8S23472:1..264	gap2	ATCEA4C655091	88							
159399	ATU021339	ATL8C1617:840..221	gap2	ATCEA4S11104	88							
159400	ATU021340	ATL8C9423:605..1024	gap2	ATCEA4S195	88							
159401	ATU021341	ATL8S10766:1..201	gap2	ATCEA4C322211	88							
159402	ATU021342	ATL8C21939:91..1714	gap2	ATCEA4S13008	87			g4335713	100	1907	1.9e-192	(AC006248) putative polygalacturonase [Arabidopsis thaliana]
159403	ATU021343	ATL8S14551:8	gap2	ATCEA4S15069	88,84,							

		8..203		, ATCEA4 S28947 , ATCEA4 S14752 , ATCEA4 S15197	83, 82							
159404	ATU021 344	ATL8C3 2596:8 71..12 75	gap2	ATCEA4 C20463 _1	88							
159405	ATU021 345	ATL8C4 04:496 ..671	gap2	ATCEA4 C1879_ 1	88							
159406	ATU021 346	ATL8C8 22:970 ..1187	gap2	ATCEA4 C17148 _1	88							
159407	ATU021 347	ATL8C3 0322:4 96..1	gap2	ATCEA4 S27190	88							
159408	ATU021 348	ATL8C4 1067:1 083..8 67	gap2	ATCEA4 S12209	88							
159409	ATU021 349	ATL8C6 51:232 7..271 2	gap2	ATCEA4 S27391	88							
159410	ATU021 350	ATL8C6 51:138 8..174 4	gap2	ATCEA4 S11406	88							
159411	ATU021 351	ATL8C3 1067:1 043..1 297	gap2	ATCEA4 S6146	88							
159412	ATU021 352	ATL8S1 4713:1	gap2	ATCEA4 C30037	88							

		89..534		_1								
159413	ATU021353	ATL8C17363:4956..4456	gap2	ATCEA4C119922_1	88							
159414	ATU021354	ATL8C17285:690..1485	gap2	ATCEA4S30448, ATCEA4C1900_1, ATCEA4S26250	88, 85, 83							
159415	ATU021355	ATL8C39900:1..126	gap2	ATCEA4C35156_1	88							
159416	ATU021356	ATL8C14082:586..849	gap2	ATCEA4S26555	88							
159417	ATU021357	ATL8C34322:440..636	gap2	ATCEA4S11326	88							
159418	ATU021358	ATL8C35770:125..1	gap2	ATCEA4C3486_1, ATCEA4S212	88, 86							
159419	ATU021359	ATL8C25514:332..1	gap2	ATCEA4S5296	88							
159420	ATU021360	ATL8C12387:251..1	gap2	ATCEA4S34787, ATCEA4S28392	88, 85							
159421	ATU021361	ATL8C14864:9	gap2	ATCEA4C24343	88							

		9..1		_1								
159422	ATU021362	ATL8C37270:1..310	gap2	ATCEA4S30192	88							
159423	ATU021363	ATL8C46891:162..707	gap2	ATCEA4C138494_1	88							
159424	ATU021364	ATL8S15123:155..1	gap2	ATCEA4S5098	88							
159425	ATU021365	ATL8S14625:210..1	gap2	ATCEA4C14067_1	88							
159426	ATU021366	ATL8C14102:593..817	gap2	ATCEA4S33431	88							
159427	ATU021367	ATL8C44914:399..531	gap2	ATCEA4C34594_1	88							
159428	ATU021368	ATL8C40014:551..812	gap2	ATCEA4S26881	88							
159429	ATU021369	ATL8C34446:365..8	gap2	ATCEA4S11599	88							
159430	ATU021370	ATL8C6011:1633..1351	gap2	ATCEA4S17243	88							
159431	ATU021371	ATL8C5484:1063..461	gap2	ATCEA4C66961_1	88							
159432	ATU021372	ATL8C3113:510..57	gap2	ATCEA4S35574	88							

159433	ATU021373	ATL8C17388:406..1	gap2	ATCEA4S31718	88							
159434	ATU021374	ATL8C44510:2777..1924	gap2	ATCEA4C31876_1, ATCEA4S27262, ATCEA4C40246_1	88, 87, 85							
159435	ATU021375	ATL8S23033:471..1	gap2	ATCEA4C6688_1	88							
159436	ATU021376	ATL8C32464:1518..1155	gap2	ATCEA4S16820	88							
159437	ATU021377	ATL8C28647:490..270	gap2	ATCEA4C102956_1	88							
159438	ATU021378	ATL8C26685:1110..980	gap2	ATCEA4S30922	88							
159439	ATU021379	ATL8C26723:2198..1912	gap2	ATCEA4S10852	88							
159440	ATU021380	ATL8C32453:1630..1288	gap2	ATCEA4C22225_1	88							
159441	ATU021381	ATL8C44059:1146..1508	gap2	ATCEA4S126	88							
159442	ATU021	ATL8S1	gap2	ATCEA4	88							

	382	5666:96..1		S2762								
159443	ATU021383	ATL8C34569:881..985	gap2	ATCEA4S3953	88							
159444	ATU021384	ATL8C2917:741..1089	gap2	ATCEA4S26737	88							
159445	ATU021385	ATL8C31146:1577..1379	gap2	ATCEA4S30113	88							
159446	ATU021386	ATL8C5517:204..320	gap2	ATCEA4S25837	88							
159447	ATU021387	ATL8C10370:1172..1430	gap2	ATCEA4S3610, ATCEA4S11794	88, 86							
159448	ATU021388	ATL8C37436:956..579	gap2	ATCEA4S20819, ATCEA4S6426	88, 84							
159449	ATU021389	ATL8S12390:346..1	gap2	ATCEA4C27449_1, ATCEA4S17344	88, 85							
159450	ATU021390	ATL8C5397:1662..1368	gap2	ATCEA4S5698	88							
159451	ATU021391	ATL8C13075:123..1	gap2	ATCEA4S31917	88							
159452	ATU021392	ATL8C44202:1	gap2	ATCEA4S12816	88							

		222..1482										
159453	ATU021393	ATL8C34720:105..677	gap2	ATCEA4C101274_1	88							
159454	ATU021394	ATL8S16342:364..487	gap2	ATCEA4S30003	88							
159455	ATU021395	ATL8S16349:1..365	gap2	ATCEA4C20463_1	88							
159456	ATU021396	ATL8C45091:374..926	gap2	ATCEA4C74210_1, ATCEA4C74210_2	88, 86							
159457	ATU021397	ATL8C30884:128..22	gap2	ATCEA4S34826	88							
159458	ATU021398	ATL8C12760:787..983	gap2	ATCEA4S31594	88							
159459	ATU021399	ATL8C44817:375..1	gap2	ATCEA4S33969, ATCEA4S33645	88, 87							
159460	ATU021400	ATL8S16476:429..213	gap2	ATCEA4S6179	88							
159461	ATU021401	ATL8C15464:1..247	gap2	ATCEA4C731_1	88							
159462	ATU021402	ATL8C12717:1	gap2	ATCEA4S27013	88							

		840..1551										
159463	ATU021403	ATL8C29012:541..215	gap2	ATCEA4C27828_1	88							
159464	ATU021404	ATL8S10511:379..490	gap2	ATCEA4C8186_1	88							
159465	ATU021405	ATL8C44498:1..157	gap2	ATCEA4S3347	88							
159466	ATU021406	ATL8C1150:1753..1839	gap2	ATCEA4S25814	88							
159467	ATU021407	ATL8C5067:753..837	gap2	ATCEA4S1753	88							
159468	ATU021408	ATL8S29107:1..148	gap2	ATCEA4C149351_1	88							
159469	ATU021409	ATL8C34884:354..235	gap2	ATCEA4C35133_2	88							
159470	ATU021410	ATL8C25242:211..135	gap2	ATCEA4S1283	88							
159471	ATU021411	ATL8C26799:1026..1224	gap2	ATCEA4S11541	88							
159472	ATU021412	ATL8C5:2569..2936	gap2	ATCEA4S27391	88							
159473	ATU021413	ATL8C34942:1	gap2	ATCEA4S4326	88							

		..281										
159474	ATU0214 14	ATL8C49997:1111..1838	gap2	ATCEA4C16887_2	88							
159475	ATU0214 15	ATL8C31166:252..1	gap2	ATCEA4C5008_1	88							
159476	ATU0214 16	ATL8C1104:986..1150	gap2	ATCEA4C90676_1	88							
159477	ATU0214 17	ATL8C34962:1082..687	gap2	ATCEA4S20276	88							
159478	ATU0214 18	ATL8C20730:1594..795	gap2	ATCEA4S24780, ATCEA4S5598, ATCEA4S24908	88, 87, 84							
159479	ATU0214 19	ATL8C36893:614..301	gap2	ATCEA4S29855	88							
159480	ATU0214 20	ATL8C32167:1144..705	gap2	ATCEA4S19765	88							
159481	ATU0214 21	ATL8C23732:1..199	gap2	ATCEA4C9558_1	88							
159482	ATU0214 22	ATL8C3216:2993..2597	gap2	ATCEA4S3931	88							
159483	ATU0214 23	ATL8C44928:1	gap2	ATCEA4S13957	88							

		36..1										
159484	ATU021424	ATL8C41868:1..457	gap2	ATCEA4C102552_1, ATCEA4S25372	88, 86							
159485	ATU021425	ATL8C21958:1138..1396	gap2	ATCEA4S10897	88							
159486	ATU021426	ATL8C2197:2222..2081	gap2	ATCEA4S26289	88							
159487	ATU021427	ATL8C49871:1..456	gap2	ATCEA4S19541	88							
159488	ATU021428	ATL8C2865:436..757	gap2	ATCEA4S12085	88							
159489	ATU021429	ATL8S30731:603..460	gap2	ATCEA4C20034_1	88							
159490	ATU021430	ATL8C49817:1082..667	gap2	ATCEA4S24021	88							
159491	ATU021431	ATL8C49743:857..391	gap2	ATCEA4S33721	88							
159492	ATU021432	ATL8C45076:6478..6851	gap2	ATCEA4S344	88							
159493	ATU021433	ATL8C49622:58..422	gap2	ATCEA4S10649	88							
159494	ATU021	ATL8S1	gap2	ATCEA4	88							

	434	7822:505..212		S14662								
159495	ATU021435	ATL8S13855:407..545	gap2	ATCEA4S16761, ATCEA4C1744_1	88, 86							
159496	ATU021436	ATL8S9446:777..587	gap2	ATCEA4S32995, ATCEA4C671_1	88, 87							
159497	ATU021437	ATL8C35088:143..545	gap2	ATCEA4S35219	88							
159498	ATU021438	ATL8C14334:5449..5297	gap2	ATCEA4S3087	88							
159499	ATU021439	ATL8C23304:252..1	gap2	ATCEA4C36522_1	88							
159500	ATU021440	ATL8C25522:482..553	gap2	ATCEA4C4264_1	88							
159501	ATU021441	ATL8C49419:1..183	gap2	ATCEA4S4274	88							
159502	ATU021442	ATL8C28370:1047..653	gap2	ATCEA4S31650	88							
159503	ATU021443	ATL8C22042:936..568	gap2	ATCEA4S20233	88							

159504	ATU0211444	ATL8S18536:495..575	gap2	ATCEA4C10017_1	88							
159505	ATU0211445	ATL8C23360:234..1	gap2	ATCEA4S32621, ATCEA4S20412, ATCEA4C23114_4	88, 88, 85							
159506	ATU0211446	ATL8C49369:1607..1511	gap2	ATCEA4S4921	88							
159507	ATU0211447	ATL8C49366:40..321	gap2	ATCEA4S26263	88							
159508	ATU0211448	ATL8C49364:1..523	gap2	ATCEA4S14944	88							
159509	ATU0211449	ATL8S18882:342..1	gap2	ATCEA4S1806	88							
159510	ATU0211450	ATL8C17069:170..559	gap2	ATCEA4C118281_1	88							
159511	ATU0211451	ATL8C4931:1..95	gap2	ATCEA4C100114_1	88							
159512	ATU0211452	ATL8C49202:424..820	gap2	ATCEA4S4086	88							
159513	ATU0211453	ATL8C31939:251..40	gap2	ATCEA4S24114	88							

		1										
159514	ATU021454	ATL8C45579:1..240	gap2	ATCEA4S27428	88							
159515	ATU021455	ATL8S19319:8..314	gap2	ATCEA4S11251	88							
159516	ATU021456	ATL8C18790:305..445	gap2	ATCEA4C33938_1	88							
159517	ATU021457	ATL8C28118:852..1034	gap2	ATCEA4S32130	88							
159518	ATU021458	ATL8C45658:3897..3750	gap2	ATCEA4S23808	88							
159519	ATU021459	ATL8S19681:279..593	gap2	ATCEA4S18867	88							
159520	ATU021460	ATL8S6144:259..434	gap2	ATCEA4C32367_1, ATCEA4S24595	88, 83							
159521	ATU021461	ATL8S19808:207..540	gap2	ATCEA4S1926	88							
159522	ATU021462	ATL8C36880:1..372	gap2	ATCEA4S14872	88							
159523	ATU021463	ATL8S19904:1..182	gap2	ATCEA4S23832	88							
159524	ATU021464	ATL8S19916:1	gap2	ATCEA4C10256	88							

		69..1		5_1								
159525	ATU021465	ATL8C18740:971..845	gap2	ATCEA4S10732	88							
159526	ATU021466	ATL8C45760:1888..2404	gap2	ATCEA4S31258	88							
159527	ATU021467	ATL8S20559:411..535	gap2	ATCEA4S1821	88							
159528	ATU021468	ATL8C45785:4871..4730	gap2	ATCEA4S253	88							
159529	ATU021469	ATL8C39663:296..1	gap2	ATCEA4S11406	88							
159530	ATU021470	ATL8C45941:455..42	gap2	ATCEA4C121360_1	88							
159531	ATU021471	ATL8C45948:193..703	gap2	ATCEA4S17873	88							
159532	ATU021472	ATL8C15278:530..18	gap2	ATCEA4C35281_2	88							
159533	ATU021473	ATL8S30834:378..146	gap2	ATCEA4C48854_1, ATCEA4C55467_1	88, 83							
159534	ATU021474	ATL8S21551:85..1	gap2	ATCEA4S35993	88							
159535	ATU021	ATL8C4	gap2	ATCEA4	87			g36953	100	1543	8.6e-	(AF096

	475	1019:2706..949		S11082				96			118	372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
159536	ATU0021476	ATL8C18550:1..187	gap2	ATCEA4C27532_1	88							
159537	ATU0021477	ATL8S21739:275..508	gap2	ATCEA4S31999	88							
159538	ATU0021478	ATL8S21769:180..78	gap2	ATCEA4S28194	88							
159539	ATU0021479	ATL8S2184:353..439	gap2	ATCEA4S36305	88							
159540	ATU0021480	ATL8C18524:601..691	gap2	ATCEA4S11004	88							
159541	ATU0021481	ATL8C1671:287..647	gap2	ATCEA4S27391	88							

159542	ATU0211482	ATL8C13378:147..437	gap2	ATCEA4S34960, ATCEA4S18265	88, 83							
159543	ATU0211483	ATL8C46121:855..414	gap2	ATCEA4S18637	88							
159544	ATU0211484	ATL8C6210:1053..904	gap2	ATCEA4C50402_1	88							
159545	ATU0211485	ATL8S22357:116..1	gap2	ATCEA4S10679	88							
159546	ATU0211486	ATL8C3683:2045..2367	gap2	ATCEA4C65_1	88							
159547	ATU0211487	ATL8C19080:2102..1826	gap2	ATCEA4C20200_1, ATCEA4S24798	88, 85							
159548	ATU0211488	ATL8S23099:505..200	gap2	ATCEA4C34087_1	88							
159549	ATU0211489	ATL8C48928:252..636	gap2	ATCEA4S32999	88							
159550	ATU0211490	ATL8C27077:754..1109	gap2	ATCEA4S35430	88							
159551	ATU0211491	ATL8C10490:1157..1	gap2	ATCEA4S27399	88							

		294										
159552	ATU021492	ATL8S23483:1..492	gap2	ATCEA4C188291	88							
159553	ATU021493	ATL8C46411:395..1	gap2	ATCEA4S11097	88							
159554	ATU021494	ATL8C30682:1167..380	gap2	ATCEA4S33992	88							
159555	ATU021495	ATL8C26190:1..753	gap2	ATCEA4C93182_2, ATCEA4C93182_1	88, 85							
159556	ATU021496	ATL8S23874:141..568	gap2	ATCEA4C92000_1	88							
159557	ATU021497	ATL8C24994:868..734	gap2	ATCEA4C8401_1	88							
159558	ATU021498	ATL8C9562:3828..2635	gap2	ATCEA4C32616_1, ATCEA4S19913	88, 84							
159559	ATU021499	ATL8C46501:273..1	gap2	ATCEA4S25835	88							
159560	ATU021500	ATL8C17191:1..105	gap2	ATCEA4S19223	88							
159561	ATU021501	ATL8S24099:175..77	gap2	ATCEA4C220691	88							
159562	ATU021	ATL8S2	gap2	ATCEA4	88							

	502	4104:477..592		S3737								
159563	ATU021503	ATL8C39286:4298..4170	gap2	ATCEA4S3087	88							
159564	ATU021504	ATL8S24364:549..401	gap2	ATCEA4S42	88							
159565	ATU021505	ATL8C36282:893..949	gap2	ATCEA4C1953_7	88							
159566	ATU021506	ATL8S24407:363..501	gap2	ATCEA4S253	88							
159567	ATU021507	ATL8S2442:80..1	gap2	ATCEA4S35993	88							
159568	ATU021508	ATL8S24584:92..517	gap2	ATCEA4S17868	88							
159569	ATU021509	ATL8C13366:789..98	gap2	ATCEA4C6369_1	88							
159570	ATU021510	ATL8C27200:1064..869	gap2	ATCEA4S33459	88							
159571	ATU021511	ATL8C7549:1201..1	gap2	ATCEA4C19958_1	88							
159572	ATU021512	ATL8S24886:1..331	gap2	ATCEA4S33093	88							
159573	ATU021513	ATL8S24889:7	gap2	ATCEA4S35993	88							

		5..1										
159574	ATU021514	ATL8S25080:76..297	gap2	ATCEA4S30576	88							
159575	ATU021515	ATL8C36084:2445..3011	gap2	ATCEA4C28960_1	88							
159576	ATU021516	ATL8C46107:70..618	gap2	ATCEA4C74549_1	88							
159577	ATU021517	ATL8C10096:843..1051	gap2	ATCEA4S5023	88							
159578	ATU021518	ATL8S20076:169..419	gap2	ATCEA4C25852_1	88							
159579	ATU021519	ATL8S25797:146..377	gap2	ATCEA4C34804_1	88							
159580	ATU021520	ATL8S10235:76..1	gap2	ATCEA4C19398_1	88							
159581	ATU021521	ATL8S25996:65..503	gap2	ATCEA4S31083	88							
159582	ATU021522	ATL8S26200:1..461	gap2	ATCEA4S5018	88							
159583	ATU021523	ATL8S26338:173..504	gap2	ATCEA4C153248_1	88							
159584	ATU021524	ATL8S28021:421..111	gap2	ATCEA4C984_1, ATCEA4	88, 84							

				S33872								
159585	ATU0215 25	ATL8S26394:222..1	gap2	ATCEA4S1635	88							
159586	ATU0215 26	ATL8S19418:1..130	gap2	ATCEA4C43848_1	88							
159587	ATU0215 27	ATL8C42284:522..1214	gap2	ATCEA4S31241,ATCEA4S32837	88, 87							
159588	ATU0215 28	ATL8C46684:3848..4088	gap2	ATCEA4S179	88							
159589	ATU0215 29	ATL8S26722:566..113	gap2	ATCEA4S25234	88							
159590	ATU0215 30	ATL8S26777:340..444	gap2	ATCEA4S11955	88							
159591	ATU0215 31	ATL8C20319:147..1	gap2	ATCEA4C5786_2	88							
159592	ATU0215 32	ATL8S27361:304..97	gap2	ATCEA4S33664	88							
159593	ATU0215 33	ATL8C11670:487..385	gap2	ATCEA4S24093	88							
159594	ATU0215 34	ATL8S27500:1..325	gap2	ATCEA4C937_3	88							
159595	ATU0215 35	ATL8S27566:100..1	gap2	ATCEA4S1669	88							

159596	ATU021536	ATL8C17883:210..563	gap2	ATCEA4S178	88							
159597	ATU021537	ATL8C37839:288..1	gap2	ATCEA4S27976	88							
159598	ATU021538	ATL8S11237:295..572	gap2	ATCEA4S6666, ATCEA4S7895	88, 82							
159599	ATU021539	ATL8C36780:215..62	gap2	ATCEA4S30137	88							
159600	ATU021540	ATL8C16577:1179..718	gap2	ATCEA4S18847	88							
159601	ATU021541	ATL8S13905:225..1	gap2	ATCEA4S2888, ATCEA4C28495_1	88, 88							
159602	ATU021542	ATL8C6063:255..1	gap2	ATCEA4S4448, ATCEA4C26747_1	88, 86							
159603	ATU021543	ATL8C12167:5613..5474	gap2	ATCEA4S253	88							
159604	ATU021544	ATL8C37950:1..374	gap2	ATCEA4S4030	88							
159605	ATU021545	ATL8S5949:381..1	gap2	ATCEA4C49877_1	88							
159606	ATU021546	ATL8C31535:9	gap2	ATCEA4S857	88							

		53..727										
159607	ATU021547	ATL8S30585:255..109	gap2	ATCEA4S15529	88							
159608	ATU021548	ATL8S30661:1..440	gap2	ATCEA4C5493_2	88							
159609	ATU021549	ATL8C47080:729..1125	gap2	ATCEA4S3931	88							
159610	ATU021550	ATL8C47129:7..172	gap2	ATCEA4C32075_1	88							
159611	ATU021551	ATL8C7687:643..24	gap2	ATCEA4S11020, ATCEA4S4379	88, 84							
159612	ATU021552	ATL8C36777:3192..2821	gap2	ATCEA4S25169	88							
159613	ATU021553	ATL8C23781:2250..1566	gap2	ATCEA4C18589_1	87	ATL8C23781:2250..1566	0.88	g4559358	99	153	8.6e-12	(AC006585) putative steroid binding protein [Arabidopsis thaliana]
159614	ATU021	ATL8C3	gap2	ATCEA4	87	ATL8C3	0.88	g33416	99	88	0.0001	(AC003

	554	3075:22..949		S9922		3075:22..509		87			3	672) putative ras protein [Arabidopsis thaliana]
159615	ATU021555	ATL8C43618:46..1350	gap2	ATCEA4S33050	87	ATL8C43618:46..1152	0.84	g4768863	99	128		(AF124757) ribosome recycling factor [Zymomonas mobilis]
159616	ATU021556	ATL8S30550:76..456	gap2	ATCEA4C64192_1	87	ATL8S30550:169..403	0.82	g3980383	99	140	2.1e-10	(AC004561) unknown protein [Arabidopsis thaliana]
159617	ATU021557	ATL8C13903:5559..1	gap2	ATCEA4S9621	87	ATL8C13903:5482..630	0.78	g3043536, g2245119	99, 38	371, 2417	2.6e-33, 3.7e-185	(AB000708) SAUR [Raphanus sativus]; (Z97343) unname

												d protein product [Arabidopsis thaliana]
159618	ATU021558	ATL8C1863:1863..521	gap2	ATCEA4C28386_1	87	ATL8C1863:1863..657	0.72	g1703220	99	342	2.6e-28	AIG2 PROTEIN [Arabidopsis thaliana]
159619	ATU021559	ATL8C17786:1..1577	gap2	ATCEA4S33176	87	ATL8C17786:126..1577	0.65	g3746073, g2462745	99, 38	240, 423	2.3e-21, 2.4e-36	(AC005311) hypothetical protein [Arabidopsis thaliana]; (AC002292) Hypothetical protein [Arabidopsis thaliana]
159620	ATU021560	ATL8C17550:588..9	gap2	ATCEA4C132628_1	87	ATL8C17550:398..9	0.58	g2121000	99	62	0.11	histone H1 homolog -

												Bordetella pertussis [Bordetella pertussis]
159621	ATU021561	ATL8C9388:3042..5113	gap2	ATCEA4S178, ATCEA4S253	87, 86	ATL8C9388:3172..5113	0.49	g4558684	99	470	8.3e-30	(AC006586) hypothetical protein [Arabidopsis thaliana]
159622	ATU021562	ATL8C15493:83..3772	gap2	ATCEA4S34143	87	ATL8C15493:731..109, ATL8C15493:923..3772	0.44, 0.83	g4585922	99	177	3.0e-13	(AC007211) putative glucan endo-1,3-beta-D-glucosidase precursor [Arabidopsis thaliana]
159623	ATU021563	ATL8C36590:1147..1681	gap2	ATCEA4S3224	87	ATL8C36590:1582..1444	0.41	g3096944	99	295	4.7e-22	(AL023094) putative protei

												n [Arabidopsis thaliana]
159624	ATU021564	ATL8C47082:4390..4734	gap2	ATCEA4S33473	87			g4544417	99	357	1.8e-30	(AC006955) unknown protein [Arabidopsis thaliana]
159625	ATU021565	ATL8C33841:1003..1	gap2	ATCEA4C13577_1	87			g3142296, g2213603	99, 51	290, 201		(AC002411) Contains similarity to hypothetical mitochondrial import receptor subunit gb|Z98597 from S. pombe. ESTs gb|T45575

												and gb|Z26435 and gb|AA394576 come from this gene. [Arabidopsis thaliana]; (AC000348) T7N9.23 [Arabidopsis thaliana]
159626	ATU021566	ATL8C5737:660..312	gap2	ATCEA4S3539	87			g4490744	99	276		(AL035708) putative protein [Arabidopsis thaliana]
159627	ATU021567	ATL8C42002:116..2162	gap2	ATCEA4S178, ATCEA4S253	87, 83			g4558684	99	223	0.0081	(AC006586) hypothetical protein [Arabidopsis

												thaliana]
159628	ATU021568	ATL8C38678:407..2184	gap2	ATCEA4S12435	87	ATL8C38678:407..2176	0.99	g4415931	98	1608	1.3e-164	(AC006418) unknown protein [Arabidopsis thaliana]
159629	ATU021569	ATL8C3099:1140..1429	gap2	ATCEA4C9161_2	87			g1352054	96	106	0.00022	ATP SYNTHASE 6 KD SUBUNIT, MITOCHONDRIAL []
159630	ATU021570	ATL8C7574:1..1201	gap2	ATCEA4C153885_1	87	ATL8C7574:85..1129	0.49	g4204286	95	1778	3.6e-135	(AC003027) Unknown protein [Arabidopsis thaliana]
159631	ATU021571	ATL8C32328:1817..1	gap2	ATCEA4S81	87			g4567296	92	2240	1.5e-185	(AC006918) putative Athila retroelement ORF1 protei

												n [Arabidopsis thaliana]
159632	ATU021572	ATL8C48026:606..1	gap2	ATCEA4S8570	87	ATL8C48026:606..145	0.56	g2754816	91	791	9.4e-68	(AF021346) non-race specific disease resistance protein [Arabidopsis thaliana]
159633	ATU021573	ATL8C35801:1..1112	gap2	ATCEA4C35866_1	87	ATL8C35801:73..1112	0.90	g4512627	89	767	2.6e-44	(AC004793) Similar to gb|Z29643 protein kinase C inhibitor (PKCI) from Zea mays and a member of HIT

												family PF|01230. [Arabidopsis thaliana]
159634	ATU021574	ATL8C8320:1..1958	gap2	ATCEA4S7752	87	ATL8C8320:221..1958	0.61	g4539460	86	419	4.8e-36	(AL049500) putative protein [Arabidopsis thaliana]
159635	ATU021575	ATL8C55:14..361	gap2	ATCEA4S12228	87	ATL8C55:14..38	0.55	g1262722	84	138	4.9e-09	(D17510) ORF67c [Pinus thunbergii]
159636	ATU021576	ATL8C22235:4353..2705	gap2	ATCEA4S27666, ATCEA4S33179	87, 83			g4263062	84	409	2.0e-40	(AC005142) hypothetical protein [Arabidopsis thaliana]
159637	ATU021577	ATL8C45027:1..4575	gap2	ATCEA4S3937	87	ATL8C45027:2945..3431	0.42	g4309767	81	3294	5.9e-281	(AC006217) putative Athila retroelement

												ORF1 protein [Arabidopsis thaliana]
159638	ATU021578	ATL8C30110:1546..1	gap2	ATCEA4S32219	87			g3805842	80	1605	6.5e-113	(AL031986) putative protein [Arabidopsis thaliana]
159639	ATU021579	ATL8C26227:1..1400	gap2	ATCEA4C119900_1	87	ATL8C26227:101..1065	0.59	g4914381	78	1760	2.0e-169	(AC007584) unknown protein [Arabidopsis thaliana]
159640	ATU021580	ATL8C42065:1..354	gap2	ATCEA4S22672	87	ATL8C42065:74..279	0.73	g1388084	77	401	3.9e-37	(U35829) thioredoxin h [Arabidopsis thaliana]
159641	ATU021581	ATL8C17681:3000..1843	gap2	ATCEA4S5541	87			g4835790	77	184	4.8e-15	(AC007296) F25C20.16

												[Arabidopsis thaliana]
159642	ATU021582	ATL8C35072:1124..1	gap2	ATCEA4C47741_1	87	ATL8C35072:1048..577	0.56	g2739373	76	793	5.7e-85	(AC002505) putative flavonol 3-o-glucosyltransferase [Arabidopsis thaliana]
159643	ATU021583	ATL8C19221:1538..134	gap2	ATCEA4S826	87	ATL8C19221:1093..217	0.43	g629669	75	560	3.6e-53	hypothetical protein - tomato []
159644	ATU021584	ATL8C42456:2892..38	gap2	ATCEA4S178, ATCEA4S253	87, 87	ATL8C42456:1637..101	0.43	g4388724	75	1261	4.9e-116	(AC006413) putative Athila ORF1 protein [Arabidopsis thaliana]
159645	ATU021585	ATL8C7117:303..151	gap2	ATCEA4C161662	87			g3776572	75	703	1.2e-42	(AC005388) ESTs

		1										gb|R65052, gb|AA712146, gb|H76533, gb|H76282, gb|AA650771, gb|H76287, gb|AA650887, gb|N37383, gb|Z29721 and gb|Z29722 come from this gene. [Arabidopsis thaliana]
159646	ATU021586	ATL8C1093:1..1296	gap2	ATCEA4C18511_1	87			g2245009	75	1299	2.5e-150	(Z97341) hypothetical protein [Arabidopsis thaliana]
159647	ATU021	ATL8C1	gap2	ATCEA4	87, 85	ATL8C1	0.82	g26888	74	828	1.3e-	(U9753

	587	7644:3212..2262		S30560, ATCEA4S410		7644:3165..2262		28			83	0) ethylene-forming-enzyme-like dioxygenase [Prunus armeniaca]
159648	ATU021588	ATL8C44576:1431..1	gap2	ATCEA4C985_1	87	ATL8C44576:1362..78	0.75	g3421384	74	1165	1.5e-120	(AF081067) IAA-Ala hydrolase; IAA-amino acid hydrolase [Arabidopsis thaliana]
159649	ATU021589	ATL8C20176:2955..1412	gap2	ATCEA4S30228	87	ATL8C20176:2912..1412	0.70	g3688188	71	1997	8.3e-213	(AL031804) pyruvate decarboxylase-1 (Pdc1) [Arabidopsis thaliana]

159650	ATU021590	ATL8C34340:223..1064	gap2	ATCEA4S972	87	ATL8C34340:223..995	0.51	g3399769	71	210	5.8e-20	(U76299) uclacyanin II [Arabidopsis thaliana]
159651	ATU021591	ATL8C48073:3350..189	gap2	ATCEA4C28520_1, ATCEA4C30695_1	87, 83			g2253010	71	512	8.8e-33	(Y14199) MAP3K delta-1 protein kinase [Arabidopsis thaliana]
159652	ATU021592	ATL8C23823:1..3175	gap2	ATCEA4S176	87	ATL8C23823:447..2776	0.67	g4836882	70	2132	4.4e-174	(AC007260) lcl|prt_seq No definition line found [Arabidopsis thaliana]
159653	ATU021593	ATL8C17050:2023..192	gap2	ATCEA4S16342, ATCEA4C85202_1	87, 86	ATL8C17050:1689..192	0.57	g3036814	70	1180	3.6e-124	(AL022373) hypothetical protein

												[Arabidopsis thaliana]
159654	ATU021594	ATL8C18168:989..1	gap2	ATCEA4S178, ATCEA4S253	87, 84	ATL8C18168:940..118	0.51	g4038066	69	321	3.2e-19	(AC005897) hypothetical protein [Arabidopsis thaliana]
159655	ATU021595	ATL8C43734:1338..1	gap2	ATCEA4C46799_1, ATCEA4C19193_1, ATCEA4S12092	87, 84, 83			g4734007	67	627		(AC007178) hypothetical protein [Arabidopsis thaliana]
159656	ATU021596	ATL8C41764:11413..1429	gap2	ATCEA4S126, ATCEA4S11628	87, 84	ATL8C41764:11357..10741, ATL8C41764:6612..1429, ATL8C41764:9045..7883	0.71, 0.48, 0.65	g3377816, g4263653	66, 30	1854, 250	4.3e-180, 3.0e-23	(AF076275) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X8

												1801) [Arabidopsis thaliana]; (AC006136) hypothetical protein [Arabidopsis thaliana]
159657	ATU021597	ATL8C46860:1..2535	gap2	ATCEA4S26449	87	ATL8C46860:399..2535	0.49	g4850396	66	748	2.9e-85	(AC007357) F3F19.15 [Arabidopsis thaliana]
159658	ATU021598	ATL8C17128:1840..1	gap2	ATCEA4C73417_1	87			g4544460	64	498	1.4e-49	(AC006592) putative reverse transcriptase [Arabidopsis thaliana]
159659	ATU021599	ATL8C11268:691..2263	gap2	ATCEA4S3937	87	ATL8C11268:758..1245	0.64	g4773910	63	346	4.3e-34	(AF147259) No defini

												tion line found [Arabidopsis thaliana]
159660	ATU021600	ATL8C236:2328..1	gap2	ATCEA4S1119	87			g3193329	63	439	6.0e-29	(AF069299) contains similarity to EF-hand calcium-binding domain (Pfam: efhand.hmm, score; 16.10) [Arabidopsis thaliana]
159661	ATU021601	ATL8C43028:777..1	gap2	ATCEA4S24059, ATCEA4S31042, ATCEA4C4851_1	87, 87, 83	ATL8C43028:586..355	0.54	g3451068	62	613	1.5e-54	(AL031326) putative protein [Arabidopsis thaliana]
159662	ATU021	ATL8C4	gap2	ATCEA4	87	ATL8C4	0.90	g29613	61	1374	9.0e-	(AL022

	602	4709:1281..28		S14647		4709:1179..167		89			146	141) purple acid phosphatase like protein [Arabidopsis thaliana]
159663	ATU021603	ATL8C33633:1181..61	gap2	ATCEA4C134546_1	87	ATL8C33633:1113..127	0.87	g3201615	60	1380	1.6e-126	(AC004669) unknown protein [Arabidopsis thaliana]
159664	ATU021604	ATL8C47013:1..1192	gap2	ATCEA4S36311	87	ATL8C47013:242..1168	0.86	g2326345	60	773	7.2e-48	(Y11187) PRL1 protein [Arabidopsis thaliana]
159665	ATU021605	ATL8C28287:79..1061	gap2	ATCEA4C886_1, ATCEA4S35728	87, 82	ATL8C28287:115..804	0.82	g682728	60	401	2.8e-44	(L40031) S-adenosyl-L-methionine:trans-caffeoyl-

												Coenzyme A 3-O-methyltransferase [Arabidopsis thaliana]
159666	ATU021606	ATL8C711:811..1	gap2	ATCEA4S34551	87	ATL8C711:811..414	0.66	g4056494	59	374	8.4e-37	(AC005896) putative protein translocase [Arabidopsis thaliana]
159667	ATU021607	ATL8C50091:598..1	gap2	ATCEA4C512_1	87	ATL8C50091:485..297	0.72	g1402894	58	358	5.7e-40	(X96867) adenine phosphoribosyltransferase [Arabidopsis thaliana]
159668	ATU021608	ATL8C43688:1..938	gap2	ATCEA4C16212_1	87			g3924606	58	1482		(AF069442) hypothetical protei

												n [Arabidopsis thaliana]
159669	ATU021609	ATL8C36297:459..703	gap2	ATCEA4S35605, ATCEA4C576_1, ATCEA4S35298, ATCEA4C575_1	87, 86, 82, 82	ATL8C36297:514..660	0.51	g1754997	57	331	2.8e-29	(U48690) calmodulin TaCaM2-1 [Triticum aestivum]
159670	ATU021610	ATL8C36275:1639..1	gap2	ATCEA4C35093_1, ATCEA4S6103	87, 85	ATL8C36275:1153..526	0.74	g125052	56	591	3.4e-46	ISOVALERYL-COA DEHYDROGENASE PRECURSOR (IVD) [Rattus norvegicus]
159671	ATU021611	ATL8C10859:2220..1	gap2	ATCEA4S178, ATCEA4S253	87, 86	ATL8C10859:2046..787	0.71	g4544429	56	927	1.7e-98	(AC006955) putative zinc-finger protein [Arabidopsis thalia

												na]
159672	ATU021612	ATL8C32373:2321..3201	gap2	ATCEA4S11082	87			g3695396	56	1003	4.2e-89	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
159673	ATU021613	ATL8C34938:1848..70	gap2	ATCEA4C92073_1	87	ATL8C34938:1819..70	0.82	g4504495	55	103	1.4e-06	HMT1 (hnRNP methyltransferase, S. cerevisiae)-like 1 [Homo sapiens]
159674	ATU021614	ATL8C43871:3676..1	gap2	ATCEA4S36305	87	ATL8C43871:3676..200	0.80	g2245378	55	566		(U83245) auxin response factor

												1 [Arabidopsis thaliana]
159675	ATU021615	ATL8C33625:1043..1	gap2	ATCEA4C98464_1	87	ATL8C33625:925..15	0.77	g4633652	54	385	1.0e-39	(AF124405) alliinase precursor [Allium cepa]
159676	ATU021616	ATL8C923:3677..4365	gap2	ATCEA4S15226, ATCEA4C24868_1	87, 84			g3413710	52	304	6.4e-29	(AC004747) hypothetical protein [Arabidopsis thaliana]
159677	ATU021617	ATL8C10700:871..1361	gap2	ATCEA4S31964	87			g2281087	52	284	7.7e-25	(AC002333) STE11 protein kinase isolog [Arabidopsis thaliana]
159678	ATU021618	ATL8C7271:1..1114	gap2	ATCEA4C233_2, ATCEA4C233_1	87, 85			g3355308	50	1502	1.4e-151	(AJ009695) wall-associated

												kinase 4 [Arabidopsis thaliana]
159679	ATU021619	ATL8C31754:669..1	gap2	ATCEA4S12597	87			g2673916	50	252	1.5e-26	(AC002561) hypothetical protein [Arabidopsis thaliana]
159680	ATU021620	ATL8C36694:1651..1	gap2	ATCEA4C26890_1	87	ATL8C36694:1309..147	0.92	g2804278	49	907	1.5e-64	(AB003516) squalene epoxidase [Panax ginseng]
159681	ATU021621	ATL8C26996:878..1	gap2	ATCEA4C18760_2, ATCEA4S23415, ATCEA4S34134	87, 83, 83	ATL8C26996:741..79	0.74	g1438881	49	432	1.2e-49	(U43839) GmCK2p [Glycine max]
159682	ATU021622	ATL8C45207:1753..1	gap2	ATCEA4C32709_1	87	ATL8C45207:1438..34	0.58	g3461841	49	773	6.7e-76	(AC005315) putative receptor protei

												n kinase [Arabidopsis thaliana]
159683	ATU021623	ATL8C42031:1..2579	gap2	ATCEA4S32757, ATCEA4S35571	87, 85	ATL8C42031:86..924, ATL8C42031:1135..2579	0.55, 0.99	g4038055	49	681	2.2e-69	(AC005897) putative cytochrome P450 [Arabidopsis thaliana]
159684	ATU021624	ATL8C3005:1170..1892	gap2	ATCEA4C27038_1	87	ATL8C3005:1170..1828	0.48	g4512659	49	996	8.7e-99	(AC006931) putative protein kinase [Arabidopsis thaliana]
159685	ATU021625	ATL8C44686:2577..4214	gap2	ATCEA4S3937	87			g4773910	49	188	2.1e-14	(AF147259) No definition line found [Arabidopsis thaliana]
159686	ATU021	ATL8C4	gap2	ATCEA4	87	ATL8C4	0.69	g44552	48	573	3.3e-	(AL035

	626	5030:1638..735		C61204_1		5030:1528..1128		95			58	528) isoflavone reductase-like protein [Arabidopsis thaliana]
159687	ATU021627	ATL8C16297:96..4992	gap2	ATCEA4S12699, ATCEA4S370	87, 83	ATL8C16297:96..1710	0.48	g4263831	48	2707	2.1e-260	(AC006067) putative reverse transcriptase [Arabidopsis thaliana]
159688	ATU021628	ATL8C899:1..2903	gap2	ATCEA4S203	87	ATL8C899:1321..2903	0.59	g4432802	47	1227	1.1e-96	(AC006437) putative pol polyprotein, 5' partial [Arabidopsis thaliana]
159689	ATU021629	ATL8C20854:1	gap2	ATCEA4S203	87			g4263545	47	976	1.2e-28	(AC006250)

		..861										putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
159690	ATU021630	ATL8C49918:1..650	gap2	ATCEA4S11438	87	ATL8C49918:51..650	0.97	g4678358	45	1026	7.7e-98	(AL049659) cytochrome p450 like protein [Arabidopsis thaliana]
159691	ATU021631	ATL8C4480:302..1	gap2	ATCEA4S7	87	ATL8C4480:302..47	0.90	g4886286	45	315	8.4e-30	(AL050300) putative protein [Arabidopsis thaliana]
159692	ATU021632	ATL8C10308:1118..1	gap2	ATCEA4C907_2	87	ATL8C10308:984..72	0.97	g2146746	44	542		protein kinase (EC 2.7.1.-) -

												Arabidopsis thaliana [Arabidopsis thaliana]
159693	ATU021633	ATL8C2618:722..1	gap2	ATCEA4S13008	87	ATL8C2618:635..80	0.77	g4586048	44	719	3.8e-74	(AC007020) putative polygalacturonase [Arabidopsis thaliana]
159694	ATU021634	ATL8C42409:1022..1	gap2	ATCEA4S36379	87	ATL8C42409:954..15	0.93	g1235680	43	1021	1.9e-106	(U48698) receptor serine/threonine kinase PR5K [Arabidopsis thaliana]
159695	ATU021635	ATL8C31039:1654..793	gap2	ATCEA4C33101_2, ATCEA4S32714	87, 82	ATL8C31039:1561..801	0.85	g4220457	43	658	2.7e-36	(AC006216) Similar to [Arabidopsis thaliana]

159696	ATU021636	ATL8C5958:250..588	gap2	ATCEA4C35227_1	87			g3056583	43	252		(AC004255) T1F9.4 [Arabidopsis thaliana]
159697	ATU021637	ATL8C1006:1..1344	gap2	ATCEA4S148, ATCEA4C8865_1	87, 86	ATL8C1006:137..1318	0.97	g4512666	42	671	5.5e-61	(AC006931) putative mei2 protein [Arabidopsis thaliana]
159698	ATU021638	ATL8C37321:1380..1	gap2	ATCEA4C38479_1, ATCEA4S6160	87, 84	ATL8C37321:922..51	0.47	g3540180	42	1265		(AC004122) Unknown protein [Arabidopsis thaliana]
159699	ATU021639	ATL8C9118:1263..1	gap2	ATCEA4C42331_1	87			g4263543	42	817		(AC006250) putative Athila retroelement ORF1 protein [Arabidopsis

												thaliana]
159700	ATU021640	ATL8C3213:1..1230	gap2	ATCEA4S3958, ATCEA4S4157	87, 84	ATL8C3213:74..1203	0.92	g3860163	41	1215	8.0e-89	(AF098962) disease resistance protein RPP1-WsA [Arabidopsis thaliana]
159701	ATU021641	ATL8C9658:1..246	gap2	ATCEA4C183_2	87	ATL8C9658:238..90	0.85	g2598932	40	311	8.9e-10	(AF027157) auxin-responsive protein IAA2 [Arabidopsis thaliana]
159702	ATU021642	ATL8S20801:90..438	gap2	ATCEA4C23941_1	87			g2129758	40	106	9.6e-05	ubiquitin conjugating enzyme E2 protein - Arabidopsis thaliana [Arabi

												dopsis thaliana]
159703	ATU021643	ATL8C49555:759..413	gap2	ATCEA4C11061_3	87			g2982289	40	104	5.9e-09	(AF051229) 60S ribosomal protein L17 [Picea mariana]
159704	ATU021644	ATL8C42197:1..527	gap2	ATCEA4S33515	87			g4538965	40	92	0.012	(AL049488) hypothetical protein [Arabidopsis thaliana]
159705	ATU021645	ATL8C21883:1..491	gap2	ATCEA4C53290_1	87	ATL8C21883:107..441	0.80	g4176538	39	87	1.2e-08	(AL035260) dna-directed rna polymerase iii subunit [Schizosaccharomyces pombe]
159706	ATU021646	ATL8C24356:4	gap2	ATCEA4S3937,	87, 87			g4773910,	39, 31	215, 261	1.4e-15,	(AF147259)

		778..6725		ATCEA4S179				g4263541			4.0e-16	No definition line found [Arabidopsis thaliana]; (AC006250) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
159707	ATU021647	ATL8C14815:885..104	gap2	ATCEA4C41169_1, ATCEA4C72027_1, ATCEA4C19250_1	87, 82, 82			g4115943	39	739	3.1e-79	(AF118223) contains similarity to eukaryotic protein kinase domains (Pfam: PF00069,

												score=312.6, E=4.7e-90, N=1) and EF hand domains (Pfam: PF00036, score=131, E=2.1e-35, N=4) [Arabidopsis thaliana]
159708	ATU021648	ATL8C13898:711..1172	gap2	ATCEA4S30986	87	ATL8C13898:727..878	0.99	g4510387	38	237	1.2e-21	(AC007017) unknown protein [Arabidopsis thaliana]
159709	ATU021649	ATL8C28879:1..1056	gap2	ATCEA4S32041	87	ATL8C28879:189..1056	0.92	g3360289	38	629	4.9e-69	(AF023164) leucine-rich repeat transmembrane protei

												n kinase 1 [Zea mays]
159710	ATU021650	ATL8S3912:1..355	gap2	ATCEA4S35428	87	ATL8S3912:106..250	0.51	g4063749	38	71	0.0029	(AC005851) hypothetical protein [Arabidopsis thaliana]
159711	ATU021651	ATL8C37812:748..254	gap2	ATCEA4C26639_1	87			g2244806	38	219	1.1e-21	(Z97336) hypothetical protein [Arabidopsis thaliana]
159712	ATU021652	ATL8C9292:1099..1326	gap2	ATCEA4S22245	87			g3980254	38	111		(AJ006053) peroxisomal membrane protein [Arabidopsis thaliana]
159713	ATU021653	ATL8C41531:863..1	gap2	ATCEA4S8692	87			g3522956	38	587	2.7e-64	(AC004411) putati

												ve pectin acetyl estera se precur sor [Arabi dopsis thalia na]
159714	ATU021 654	ATL8C1 434:20 08..1	gap2	ATCEA4 S11406 , ATCEA4 S3937	87, 86	ATL8C1 434:20 08..50 6	0.97	g47739 10	37	147	3.1e-05	(AF147 259) No defini tion line found [Arabi dopsis thalia na]
159715	ATU021 655	ATL8C1 8013:5 586..1 128	gap2	ATCEA4 S12828	87	ATL8C1 8013:5 449..2 638	0.48	g41153 61, g45570 68	37, 35	169, 1089	1.2e-07, 1.6e-95	(AC005 957) hypoth etical protei n [Arabi dopsis thalia na]; (AC007 045) putati ve pol polypr otein [Arabi dopsis

												thaliana]
159716	ATU021656	ATL8S727:538..1	gap2	ATCEA4C1869_1	87			g2435513	37	250	6.5e-30	(AF024504) similar to the CYSE/LACA/LPXA/NODL family of acetyltransferases; most similar to serine acetyltransferases [Arabidopsis thaliana]
159717	ATU021657	ATL8C901:3955..2155	gap2	ATCEA4S3937, ATCEA4S11510	87, 82			g4773910	37	226	3.4e-16	(AF147259) No definition line found [Arabidopsis thaliana]
159718	ATU021658	ATL8C38450:1	gap2	ATCEA4C13869	87			g4587540	37	411	1.4e-28	(AC006577)

		..524		6_1								Belongs to the PF|00657 Lipase/Acylhydrolase with GDSL-motif family. [Arabidopsis thaliana]
159719	ATU021659	ATL8C47617:4840..2847	gap2	ATCEA4S10796	87	ATL8C47617:4822..3081	0.86	g4191788, g2392767	36, 35	84, 199	3.8e-05, 3.1e-17	(AC005917) putative 1-aminocyclopropane-1-carboxylate oxidase [Arabidopsis thaliana]; (AC002534) hypothetical protein

												[Arabidopsis thaliana]
159720	ATU021660	ATL8C41059:2236..1103	gap2	ATCEA4S23796	87	ATL8C41059:1953..1774	0.72	g4926820	36	249	4.4e-22	(AC004135) T17H7.5 [Arabidopsis thaliana]
159721	ATU021661	ATL8C47979:1..516	gap2	ATCEA4S1609	87	ATL8C47979:136..369	0.61	g2244831	35	566	7.8e-24	(Z97337) hypothetical protein [Arabidopsis thaliana]
159722	ATU021662	ATL8C25089:1..1174	gap2	ATCEA4S6143	87	ATL8C25089:161..1007	0.45	g549643	35	335	3.0e-34	HYPOTHETICAL 102.7 KD PROTEIN IN PRP16-SRP40 INTERGENIC REGION [Saccharomyces cerevisiae]
159723	ATU021663	ATL8S14814:1	gap2	ATCEA4C20137	87			g4490735	35	650	8.9e-55	(AL035708)

		..470		_2								putative protein [Arabidopsis thaliana]
159724	ATU021664	ATL8C34029:928..360	gap2	ATCEA4S4137	87	ATL8C34029:815..500	0.87	g3924597	34	259	6.5e-26	(AF069442) putative oxidoreductase [Arabidopsis thaliana]
159725	ATU021665	ATL8C4471:1394..1	gap2	ATCEA4S2804	87	ATL8C4471:1394..104	0.68	g3757516	34	1408	6.5e-146	(AC005167) putative TMV resistance protein. [Arabidopsis thaliana]
159726	ATU021666	ATL8C36886:653..1	gap2	ATCEA4C22690_1	87	ATL8C36886:634..195	0.66	g3063710	33	719	1.0e-59	(AL022537) putative protein [Arabidopsis thalia

												na]
159727	ATU021667	ATL8C3682:9066..14119	gap2	ATCEA4S3937, ATCEA4S11406	87, 82	ATL8C3682:12771..9066	0.50	g4773910	33	177	4.3e-09	(AF147259) No definition line found [Arabidopsis thaliana]
159728	ATU021668	ATL8C13946:385..753	gap2	ATCEA4C6502_1	87			g2191177	33	248	3.0e-24	(AF007270) belongs to the SPOU family of rRNA methylases. [Arabidopsis thaliana]
159729	ATU021669	ATL8C1388:745..1806	gap2	ATCEA4S3937	87			g4773910	33	129	1.6e-09	(AF147259) No definition line found [Arabidopsis thaliana]
159730	ATU021670	ATL8C31880:1	gap2	ATCEA4C43180	87			g4469023	33	318	1.1e-20	(AL035602)

		104..1		_1								putative protein [Arabidopsis thaliana]
159731	ATU021671	ATL8C21277:1..1352	gap2	ATCEA4S3958, ATCEA4C251_6	87, 86	ATL8C21277:1..598	0.67	g3860167	32	1110	1.9e-117	(AF098964) disease resistance protein RPP1-WsC [Arabidopsis thaliana]
159732	ATU021672	ATL8C15392:1399..270	gap2	ATCEA4S34558	87	ATL8C15392:1367..335	0.64	g4885505	32	256	5.8e-24	N-acetylated alpha-linked acidic dipeptidase II [Homo sapiens]
159733	ATU021673	ATL8C2762:5303..10999	gap2	ATCEA4S12699, ATCEA4S3937, ATCEA4	87, 86, 85	ATL8C2762:10753..9097	0.44	g4263831	32	1531	5.7e-143	(AC006067) putative reverse

				S370								transcriptase [Arabidopsis thaliana]
159734	ATU021674	ATL8C7454:1..875	gap2	ATCEA4S26078	87			g4490744	32	91	1.0e-06	(AL035708) putative protein [Arabidopsis thaliana]
159735	ATU021675	ATL8C30344:663..1	gap2	ATCEA4S30779	87			g3047114	32	412	1.1e-25	(AF058919) No definition line found [Arabidopsis thaliana]
159736	ATU021676	ATL8C49537:779..1189	gap2	ATCEA4C335_1	87	ATL8C49537:779..1130	0.93	g3080388	31	393	7.2e-41	(AL022603) myb-related protein [Arabidopsis thaliana]
159737	ATU021	ATL8C3	gap2	ATCEA4	87	ATL8C3	0.93	g10767	31	571	4.0e-	heat-

	677	8236:1293..1		C16197_1		8236:1020..80		58			53	shock protein precursor - rye [Secale cereale]
159738	ATU021678	ATL8C40514:786..1	gap2	ATCEA4S31663, ATCEA4C1983_1	87, 85	ATL8C40514:142..66	0.84	g1245182	31	350	1.4e-19	(U49398) sterol delta-7 reductase [Arabidopsis thaliana]
159739	ATU021679	ATL8C13705:670..99	gap2	ATCEA4C30695_1, ATCEA4C28520_1	87, 85	ATL8C13705:498..115	0.80	g2253010	31	156	2.5e-14	(Y14199) MAP3K delta-1 protein kinase [Arabidopsis thaliana]
159740	ATU021680	ATL8S7426:527..1	gap2	ATCEA4S1358	87	ATL8S7426:415..8	0.70	g4335721	31	104	1.4e-08	(AC006248) putative zinc-finger protei

												n [Arabidopsis thaliana]
159741	ATU021681	ATL8C24351:1..3337	gap2	ATCEA4S4078	87	ATL8C24351:72..3337	0.66	g3377827	31	300	2.9e-27	(AF075598) No definition line found [Arabidopsis thaliana]
159742	ATU021682	ATL8C1739:4054..165	gap2	ATCEA4S13901	87	ATL8C1739:3040..391	0.57	g4038056	31	1050	3.8e-85	(AC005897) putative transposon [Arabidopsis thaliana]
159743	ATU021683	ATL8S13551:1..691	gap2	ATCEA4S25030	87	ATL8S13551:289..350	0.52	g3075392	31	330	1.3e-31	(AC004484) putative steroid dehydrogenase [Arabidopsis thaliana]
159744	ATU021	ATL8C3	gap2	ATCEA4	87			g29353	31	600	2.0e-	(AF044

	684	0055:638..1		C7534_1				42			43	216) steroid 22-alpha-hydroxylase; DWF4; CYP90B1 [Arabidopsis thaliana]
159745	ATU021685	ATL8C36532:1..1207	gap2	ATCEA4C907_1	87	ATL8C36532:178..747	0.76	g1362002	30	403	8.5e-27	protein kinase 1 - Arabidopsis thaliana [Arabidopsis thaliana]
159746	ATU021686	ATL8C35366:2407..2930	gap2	ATCEA4C4553_3, ATCEA4S7932	87, 83			g231586	30	397	5.6e-126	ATP SYNTHASE BETA CHAIN, MITOCHONDRIAL PRECURSOR [Hevea brasiliensis]
159747	ATU021	ATL8S2	gap2	ATCEA4	87	ATL8S2	1.00					

	687	5342:1..564		S34860		5342:23..114						
159748	ATU021688	ATL8S2 2672:1..455	gap2	ATCEA4C121192_1	87	ATL8S2 2672:47..455	0.99					
159749	ATU021689	ATL8C4 9005:1..933	gap2	ATCEA4C71014_1	87	ATL8C4 9005:52..933	0.99					
159750	ATU021690	ATL8C1 3354:591..71	gap2	ATCEA4S29566	87	ATL8C1 3354:544..71	0.98					
159751	ATU021691	ATL8S2 3666:324..556	gap2	ATCEA4S20849, ATCEA4S2367	87, 86	ATL8S2 3666:347..535	0.97					
159752	ATU021692	ATL8C3 0711:721..145	gap2	ATCEA4S7192	87	ATL8C3 0711:684..145	0.97					
159753	ATU021693	ATL8C3 050:752..310	gap2	ATCEA4S34632	87	ATL8C3 050:477..353	0.97					
159754	ATU021694	ATL8C2 5100:555..1	gap2	ATCEA4S33106	87	ATL8C2 5100:555..100	0.97					
159755	ATU021695	ATL8C3 2596:1716..4236	gap2	ATCEA4S23799	86	ATL8C3 2596:1716..3942	0.97	g2342733	100	1858	1.6e-136	(AC002341) hypothetical protein [Arabidopsis thaliana]
159756	ATU021696	ATL8S2 88:142..1	gap2	ATCEA4S10840	87	ATL8S2 88:142..12	0.96					

159757	ATU021697	ATL8S1742:437..1	gap2	ATCEA4C5960_1	87	ATL8S1742:373..32	0.95					
159758	ATU021698	ATL8C4385:2184..3480	gap2	ATCEA4S30560, ATCEA4S410	86, 86	ATL8C4385:2193..3480	0.95	g2688828	100	907	1.8e-89	(U97530) ethylene-forming-enzyme-like dioxygenase [Prunus armeniaca]
159759	ATU021699	ATL8C18349:1450..274	gap2	ATCEA4C18808_1	87	ATL8C18349:1224..274	0.95					
159760	ATU021700	ATL8C37794:3185..2055	gap2	ATCEA4S9002	87	ATL8C37794:3167..2055	0.94					
159761	ATU021701	ATL8C29816:280..564	gap2	ATCEA4S4279	87	ATL8C29816:280..394	0.94					
159762	ATU021702	ATL8C47733:256..662	gap2	ATCEA4C8662_1	87	ATL8C47733:321..546	0.93					
159763	ATU021703	ATL8C34206:256..1868	gap2	ATCEA4S31306	87	ATL8C34206:256..1868	0.92					
159764	ATU021704	ATL8C17027:386..25	gap2	ATCEA4C25817_2,	87, 82	ATL8C17027:386..24	0.92					

		50		ATCEA4S28797		83						
159765	ATU021705	ATL8C27464:1..1822	gap2	ATCEA4C59956_1, ATCEA4S7469	87, 86	ATL8C27464:214..1469	0.92					
159766	ATU021706	ATL8C44712:1..529	gap2	ATCEA4S16798, ATCEA4C6574_1	87, 86	ATL8C44712:166..252	0.92					
159767	ATU021707	ATL8C3711:227..478	gap2	ATCEA4S253	87	ATL8C3711:317..478	0.92					
159768	ATU021708	ATL8S26439:452..1	gap2	ATCEA4S34647	87	ATL8S26439:452..182	0.92					
159769	ATU021709	ATL8C3733:21..180	gap2	ATCEA4S8219	87	ATL8C3733:45..165	0.91					
159770	ATU021710	ATL8S29871:49..225	gap2	ATCEA4C689_1	87	ATL8S29871:49..225	0.91					
159771	ATU021711	ATL8C47867:9442..7564	gap2	ATCEA4S253	87	ATL8C47867:9351..8733	0.91					
159772	ATU021712	ATL8C48536:1297..52	gap2	ATCEA4C34266_1	87	ATL8C48536:694..315	0.90					
159773	ATU021713	ATL8C22798:1027..168	gap2	ATCEA4C46696_1	87	ATL8C22798:1025..168	0.90					
159774	ATU021714	ATL8C16033:6	gap2	ATCEA4C16331	87	ATL8C16033:6	0.90					

		270..4733		1_1		270..4733						
159775	ATU021715	ATL8C50126:1..606	gap2	ATCEA4S2652, ATCEA4C133001	87, 83	ATL8C50126:210..598	0.90					
159776	ATU021716	ATL8S13753:1..267	gap2	ATCEA4C9394_1	87	ATL8S13753:37..168	0.90					
159777	ATU021717	ATL8C22832:1..385	gap2	ATCEA4S7723	87	ATL8C22832:27..385	0.88					
159778	ATU021718	ATL8C36764:1791..2837	gap2	ATCEA4S240	87	ATL8C36764:1791..2803	0.88					
159779	ATU021719	ATL8C44009:1..1063	gap2	ATCEA4C22069_1	87	ATL8C44009:192..1063	0.88					
159780	ATU021720	ATL8S6426:503..85	gap2	ATCEA4C32053_1	87	ATL8S6426:410..112	0.88					
159781	ATU021721	ATL8S21594:1..312	gap2	ATCEA4C34379_2, ATCEA4C34379_3	87, 84	ATL8S21594:138..271	0.87					
159782	ATU021722	ATL8C20307:2171..517	gap2	ATCEA4C1781_1, ATCEA4S22634	86, 86	ATL8C20307:2050..772	0.87	g2642159	100	1584	2.1e-161	(AC003000) putative mannose-1-phosphate guanyltransf

												erase [Arabidopsis thaliana]
159783	ATU021723	ATL8C14091:2535..7	gap2	ATCEA4S178	86	ATL8C14091:2141..67	0.87	g4038066, g3779029	100, 42	466, 302	5.2e-32, 3.9e-22	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AC005171) putative zinc finger protein [Arabidopsis thaliana]
159784	ATU021724	ATL8C39644:208..2798	gap2	ATCEA4S2713	87	ATL8C39644:208..2798	0.86					
159785	ATU021725	ATL8S28917:346..164	gap2	ATCEA4C37459_1	87	ATL8S28917:300..247	0.85					
159786	ATU021726	ATL8S12987:239..57	gap2	ATCEA4C2010_1	87	ATL8S12987:112..58	0.85					
159787	ATU021727	ATL8C35418:8	gap2	ATCEA4S32198	87	ATL8C35418:8	0.85					

		14..212				14..212						
159788	ATU0217 28	ATL8C23587:670..49	gap2	ATCEA4C48853_1	87	ATL8C23587:619..49	0.85					
159789	ATU0217 29	ATL8C36064:639..921	gap2	ATCEA4C18837_1	87	ATL8C36064:876..917	0.85					
159790	ATU0217 30	ATL8C21164:156..2439	gap2	ATCEA4S6284	87	ATL8C21164:156..2439	0.84					
159791	ATU0217 31	ATL8C17297:114..322	gap2	ATCEA4C73963_1	87	ATL8C17297:114..209	0.84					
159792	ATU0217 32	ATL8S6943:375..86	gap2	ATCEA4S5828	87	ATL8S6943:348..86	0.84					
159793	ATU0217 33	ATL8C18417:267..1	gap2	ATCEA4S1255	87	ATL8C18417:258..177	0.84					
159794	ATU0217 34	ATL8C49048:703..7	gap2	ATCEA4S11571	87	ATL8C49048:703..7	0.83					
159795	ATU0217 35	ATL8C1321:1242..68	gap2	ATCEA4S10985	87	ATL8C1321:905..185	0.83					
159796	ATU0217 36	ATL8C23266:1334..1	gap2	ATCEA4C1820_1	87	ATL8C23266:1334..118	0.82					
159797	ATU0217 37	ATL8C42886:3015..802	gap2	ATCEA4S23799	86	ATL8C42886:3015..869	0.82	g2342733	100	1908	8.9e-163	(AC002341) hypothetical protein

												[Arabidopsis thaliana]
159798	ATU021738	ATL8C12647:89..1922	gap2	ATCEA4S30183	87	ATL8C12647:89..1922	0.81					
159799	ATU021739	ATL8C21940:1..813	gap2	ATCEA4C132790_1	87	ATL8C21940:388..813	0.81					
159800	ATU021740	ATL8S441:1..326	gap2	ATCEA4C9351_1	87	ATL8S441:1..248	0.81					
159801	ATU021741	ATL8C1983:796..1	gap2	ATCEA4C74152_1	87	ATL8C1983:796..141	0.80					
159802	ATU021742	ATL8C5751:1019..576	gap2	ATCEA4S13702	87	ATL8C5751:920..576	0.80					
159803	ATU021743	ATL8C11529:1452..91	gap2	ATCEA4S26043	87	ATL8C11529:1452..193	0.80					
159804	ATU021744	ATL8C11095:290..968	gap2	ATCEA4S7877, ATCEA4S6156	87, 85	ATL8C11095:290..929	0.80					
159805	ATU021745	ATL8C28239:117..3772	gap2	ATCEA4S3533, ATCEA4C36211_2	87, 82	ATL8C28239:117..3772	0.79					
159806	ATU021746	ATL8C8:436..1129	gap2	ATCEA4S31937	87	ATL8C8:436..1129	0.78					
159807	ATU021747	ATL8C2225:68	gap2	ATCEA4S6051	87	ATL8C2225:62	0.78					

		8..161				7..161						
159808	ATU021748	ATL8C38766:1082..365	gap2	ATCEA4S35030, ATCEA4S25645	87, 83	ATL8C38766:1082..496	0.78					
159809	ATU021749	ATL8C23673:1120..1	gap2	ATCEA4S34828	87	ATL8C23673:1120..593	0.77					
159810	ATU021750	ATL8C46882:401..1760	gap2	ATCEA4C143707_1	87	ATL8C46882:401..1760	0.77					
159811	ATU021751	ATL8S15085:311..69	gap2	ATCEA4S20706	87	ATL8S15085:311..226	0.75					
159812	ATU021752	ATL8C4019:1..362	gap2	ATCEA4C9178_1	87	ATL8C4019:25..362	0.75					
159813	ATU021753	ATL8C1030:868..1563	gap2	ATCEA4S253, ATCEA4S178	87, 87	ATL8C1030:959..1563	0.74					
159814	ATU021754	ATL8C11186:613..1	gap2	ATCEA4C24061_1	87	ATL8C11186:613..9	0.74					
159815	ATU021755	ATL8S24942:77..398	gap2	ATCEA4C7804_1	87	ATL8S24942:78..398	0.73					
159816	ATU021756	ATL8C49727:1528..1683	gap2	ATCEA4S4629	87	ATL8C49727:1528..1652	0.73					
159817	ATU021757	ATL8S6923:1..373	gap2	ATCEA4S32291	87	ATL8S6923:59..361	0.73					
159818	ATU021758	ATL8C24:1041	gap2	ATCEA4S34181	87	ATL8C24:1041	0.73					

		..328				..383						
159819	ATU021759	ATL8C41816:2319..425	gap2	ATCEA4S11082	86	ATL8C41816:2175..426	0.73	g3695396	100	1970	4.3e-162	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
159820	ATU021760	ATL8C43833:1919..20	gap2	ATCEA4S6977	87	ATL8C43833:1919..20	0.72					
159821	ATU021761	ATL8C24410:994..695	gap2	ATCEA4C17340_2	87	ATL8C24410:994..842	0.71					
159822	ATU021762	ATL8C9572:1..255	gap2	ATCEA4S12922	87	ATL8C9572:204..255	0.70					
159823	ATU021763	ATL8C456:205..1025	gap2	ATCEA4S12774	87	ATL8C456:205..1025	0.69					
159824	ATU021764	ATL8C28054:1..706	gap2	ATCEA4S12476,ATCEA4	87, 87	ATL8C28054:44..706	0.68					

				C3146_1								
159825	ATU0217 65	ATL8C30707:122..904	gap2	ATCEA4S20174	87	ATL8C30707:122..763	0.68					
159826	ATU0217 66	ATL8C21668:255..1308	gap2	ATCEA4S29624	87	ATL8C21668:255..1308	0.68					
159827	ATU0217 67	ATL8S16304:284..629	gap2	ATCEA4S19904, ATCEA4S26789	87, 86	ATL8S16304:626..467	0.68					
159828	ATU0217 68	ATL8C10998:1..4993	gap2	ATCEA4C1908_1	86	ATL8C10998:246..4597	0.67	g4581164, g1146165	100, 100	2910, 983	1.2e-214, 7.4e-90	(AC006220) putative polyprotein [Arabidopsis thaliana]; (L47479) urophorphyrin III methylase [Arabidopsis thaliana]
159829	ATU0217 69	ATL8C5800:123..862	gap2	ATCEA4C18414_1, ATCEA4	87, 85	ATL8C5800:123..849	0.67					

				S16827								
159830	ATU021770	ATL8C30970:1637..1869	gap2	ATCEA4S32080	87	ATL8C30970:1869..1637	0.67					
159831	ATU021771	ATL8C41489:1118..157	gap2	ATCEA4S14449	86	ATL8C41489:911..157	0.67	g629670	100	730	2.5e-67	hypothetical protein - tomato []
159832	ATU021772	ATL8C49326:231..780	gap2	ATCEA4S12629	87	ATL8C49326:231..361	0.66					
159833	ATU021773	ATL8C33060:90..595	gap2	ATCEA4S30843	87	ATL8C33060:198..595	0.66					
159834	ATU021774	ATL8C45965:68..737	gap2	ATCEA4S17759	87	ATL8C45965:68..266	0.65					
159835	ATU021775	ATL8C45606:1388..11	gap2	ATCEA4S31021, ATCEA4S33226	87, 84	ATL8C45606:1340..11	0.63					
159836	ATU021776	ATL8C46541:87..869	gap2	ATCEA4S34611	87	ATL8C46541:87..869	0.63					
159837	ATU021777	ATL8C12172:1148..209	gap2	ATCEA4S31474	87	ATL8C12172:1148..209	0.62					
159838	ATU021778	ATL8C29077:800..1017	gap2	ATCEA4C22821_1	87	ATL8C29077:847..966	0.62					
159839	ATU021779	ATL8C24817:2	gap2	ATCEA4C34341	87	ATL8C24817:2	0.61					

		5..1248		_1		5..1248						
159840	ATU021780	ATL8C20575:1328..1865	gap2	ATCEA4S31694	87	ATL8C20575:1328..1853	0.61					
159841	ATU021781	ATL8C15074:630..1509	gap2	ATCEA4S3365	87	ATL8C15074:1120..1509	0.60					
159842	ATU021782	ATL8C19254:3332..1	gap2	ATCEA4S253, ATCEA4S178	86, 82	ATL8C19254:3128..478	0.60	g4038066, g3377816	100, 57	610, 1649	1.0e-27, 8.7e-173	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AF076275) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thalia

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159843	ATU021783	ATL8S12840:359..1	gap2	ATCEA4C27083_1	87	ATL8S12840:234..139	0.60					
159844	ATU021784	ATL8C44823:1333..764	gap2	ATCEA4C6482_1	87	ATL8C44823:1037..764	0.59					
159845	ATU021785	ATL8C40872:29..568	gap2	ATCEA4C8034_1	87	ATL8C40872:93..164	0.59					
159846	ATU021786	ATL8C22682:1411..75	gap2	ATCEA4C70508_1	87	ATL8C22682:1411..281	0.57					
159847	ATU021787	ATL8C22126:1712..2660	gap2	ATCEA4S28071	87	ATL8C22126:1712..2635	0.57					
159848	ATU021788	ATL8C29374:1263..576	gap2	ATCEA4C116693_1	87	ATL8C29374:1263..982	0.55					
159849	ATU021789	ATL8C5656:614..1171	gap2	ATCEA4C156128_1	87	ATL8C5656:614..1023	0.55					
159850	ATU021790	ATL8C46207:1457..7550	gap2	ATCEA4S4080, ATCEA4S27411	86, 82	ATL8C46207:2420..7105	0.54	g3021276, g3021282	100, 100	1435, 2752	7.2e-144, 1.8e-227	(AL022347) serine/threonine kinase-like protein [Arabidopsis thalia

												na]; (AL022347) serine /threonine - like protein [Arabidopsis thaliana]
159851	ATU021791	ATL8C4809:83..1270	gap2	ATCEA4S35887	87	ATL8C4809:83..1270	0.54					
159852	ATU021792	ATL8C37688:166..901	gap2	ATCEA4S588	87	ATL8C37688:166..901	0.54					
159853	ATU021793	ATL8C9641:5382..4200	gap2	ATCEA4S13901	87	ATL8C9641:5382..4200	0.54					
159854	ATU021794	ATL8C38222:205..566	gap2	ATCEA4S11722	87	ATL8C38222:205..566	0.53					
159855	ATU021795	ATL8C28405:414..51	gap2	ATCEA4C32869_1	87	ATL8C28405:343..51	0.52					
159856	ATU021796	ATL8S5987:553..3	gap2	ATCEA4S34502, ATCEA4S31391	87, 85	ATL8S5987:396..120	0.50					
159857	ATU021797	ATL8C2724:1..439	gap2	ATCEA4C46999_1	87	ATL8C2724:337..394	0.49					
159858	ATU021	ATL8C3	gap2	ATCEA4	87	ATL8C3	0.49					

	798	8321:513..908		C106271_1		8321:617..895						
159859	ATU021799	ATL8C34471:78..1888	gap2	ATCEA4S2887, ATCEA4C54004_1	87, 87	ATL8C34471:78..1594	0.48					
159860	ATU021800	ATL8C16608:2158..138	gap2	ATCEA4S27401	86	ATL8C16608:2158..138	0.48	g4309868	100	2571	1.7e-159	(AC006527) putative retrotransposon-like orf [Arabidopsis thaliana]
159861	ATU021801	ATL8S6465:1..444	gap2	ATCEA4C32809_1	87	ATL8S6465:289..444	0.48					
159862	ATU021802	ATL8C42906:82..1066	gap2	ATCEA4C28520_1, ATCEA4C30695_1	87, 83	ATL8C42906:412..1066	0.47					
159863	ATU021803	ATL8C12267:1994..1265	gap2	ATCEA4C114101_1	87	ATL8C12267:1994..1806	0.47					
159864	ATU021804	ATL8C41820:182..1107	gap2	ATCEA4C23176_1, ATCEA4S2918	87, 84	ATL8C41820:182..1107	0.47					
159865	ATU021	ATL8C2	gap2	ATCEA4	87	ATL8C2	0.47					

	805	1240:415..1012		C144729_1		1240:1012..415						
159866	ATU021806	ATL8C7109:1353..88	gap2	ATCEA4S30303	87	ATL8C7109:1082..88	0.46					
159867	ATU021807	ATL8S4926:1..276	gap2	ATCEA4S30695	87	ATL8S4926:142..276	0.46					
159868	ATU021808	ATL8C15371:374..1	gap2	ATCEA4C90364_1	87	ATL8C15371:212..54	0.45					
159869	ATU021809	ATL8C41761:6756..373	gap2	ATCEA4S3549	86	ATL8C41761:6756..901	0.44	g4926870, g4733960, g2072967	100, 56, 35	1970, 277, 291	4.7e-210, 5.2e-25, 1.8e-34	(AC007509) putative reverse transcriptase [Arabidopsis thaliana]; (AC007294) putative zinc-finger protein [Arabidopsis thaliana]; (U93570) putati

												ve p150 [Homo sapiens]
159870	ATU021810	ATL8C9404:154..1239	gap2	ATCEA4S34526	87	ATL8C9404:154..1239	0.44					
159871	ATU021811	ATL8C31567:872..270	gap2	ATCEA4C33965_1	87	ATL8C31567:866..270	0.43					
159872	ATU021812	ATL8S16031:374..1	gap2	ATCEA4S10900	87	ATL8S16031:374..203	0.43					
159873	ATU021813	ATL8C46584:1..3955	gap2	ATCEA4S81	86	ATL8C46584:456..1882, ATL8C46584:2216..3955	0.43, 0.71	g4567296, g4567295	100, 68	2129, 1502	1.4e-203, 2.9e-153	(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]; (AC006918) putative pol polyprotein [Arabidopsis thalia

												na]
159874	ATU021814	ATL8C23444:1673..214	gap2	ATCEA4S13901	87	ATL8C23444:1673..214	0.42					
159875	ATU021815	ATL8C18620:9967..976	gap2	ATCEA4S253, ATCEA4S178	86, 84	ATL8C18620:8524..1627, ATL8C18620:9928..8825	0.42, 0.53	g4038066, g4773908, g3319364, g3695399	100, 64, 58, 44	645, 1638, 1211, 929	3.5e-47, 2.5e-138, 1.2e-113, 7.2e-103	(AC005897) hypothetical protein [Arabidopsis thaliana]; (AF147259) No definition line found [Arabidopsis thaliana]; (AF077408) contains similarity to maize transposon MuDR mudrA-like protei

												ns [Arabidopsis thaliana]; (AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
159876	ATU021816	ATL8C30104:1..266	gap2	ATCEA4S344	87	ATL8C30104:107..266	0.42					
159877	ATU021817	ATL8S10595:495..1	gap2	ATCEA4C1930_1	87	ATL8S10595:415..98	0.40					
159878	ATU021818	ATL8C17872:1349..1128	gap2	ATCEA4S9804	87							
159879	ATU021819	ATL8S21292:155..1	gap2	ATCEA4C14727_1	87							

159880	ATU0211820	ATL8C45063:1821..1597	gap2	ATCEA4C39523_2	87							
159881	ATU0211821	ATL8C38464:328..1	gap2	ATCEA4C28730_1	87							
159882	ATU0211822	ATL8C24630:1..79	gap2	ATCEA4C801_1	87							
159883	ATU0211823	ATL8C38340:622..1	gap2	ATCEA4S4478	87							
159884	ATU0211824	ATL8C38283:552..1	gap2	ATCEA4S28445	87							
159885	ATU0211825	ATL8C24459:618..1202	gap2	ATCEA4S33635	87							
159886	ATU0211826	ATL8S22812:256..446	gap2	ATCEA4S12647	87							
159887	ATU0211827	ATL8C13236:1..214	gap2	ATCEA4S1130	87							
159888	ATU0211828	ATL8C37985:486..1	gap2	ATCEA4C17470_1	87							
159889	ATU0211829	ATL8C26472:21..1217	gap2	ATCEA4C129684_1	87							
159890	ATU0211830	ATL8C14685:1..503	gap2	ATCEA4C17325_1	87							
159891	ATU0211831	ATL8C37596:300..70	gap2	ATCEA4C92712_1	87							

		1										
159892	ATU021832	ATL8C13133:967..864	gap2	ATCEA4S29983	87							
159893	ATU021833	ATL8C24409:825..1100	gap2	ATCEA4S15839	87							
159894	ATU021834	ATL8C16060:1163..683	gap2	ATCEA4C23176_1	87							
159895	ATU021835	ATL8C23429:11319..11808	gap2	ATCEA4S3937	87							
159896	ATU021836	ATL8S2324:428..2	gap2	ATCEA4S30179	87							
159897	ATU021837	ATL8C37532:1326..1128	gap2	ATCEA4S8164	87							
159898	ATU021838	ATL8C15136:228..1	gap2	ATCEA4C139521	87							
159899	ATU021839	ATL8C37406:787..421	gap2	ATCEA4C118532_1	87							
159900	ATU021840	ATL8C37378:1253..1851	gap2	ATCEA4S33629	87							
159901	ATU021841	ATL8C3727:2774..2709	gap2	ATCEA4S13046	87							
159902	ATU021	ATL8C1	gap2	ATCEA4	87							

	842	507:1..173		S16883								
159903	ATU021843	ATL8C37055:801..454	gap2	ATCEA4S3499	87							
159904	ATU021844	ATL8C4153:265..88	gap2	ATCEA4C5203_1, ATCEA4S6036	87, 86							
159905	ATU021845	ATL8C24356:4025..3665	gap2	ATCEA4S27391	87							
159906	ATU021846	ATL8S10115:1..524	gap2	ATCEA4C9059_1	87							
159907	ATU021847	ATL8C14790:98..299	gap2	ATCEA4S28015, ATCEA4S34783	87, 86							
159908	ATU021848	ATL8C14808:462..227	gap2	ATCEA4S179	87							
159909	ATU021849	ATL8S20250:352..60	gap2	ATCEA4C55786_1, ATCEA4C55786_2	87, 85							
159910	ATU021850	ATL8C41508:2854..2568	gap2	ATCEA4C49109_1, ATCEA4C24144_1	87, 83							
159911	ATU021	ATL8S2	gap2	ATCEA4	87							

	851	0280:201..58		C27989_1								
159912	ATU021852	ATL8S10526:1..444	gap2	ATCEA4C45397_1	87							
159913	ATU021853	ATL8C14114:431..78	gap2	ATCEA4S5366	87							
159914	ATU021854	ATL8S10675:224..1	gap2	ATCEA4S18184, ATCEA4S28947	87, 86							
159915	ATU021855	ATL8C3370:1917..1446	gap2	ATCEA4S11274, ATCEA4S13040	87, 84							
159916	ATU021856	ATL8S7877:183..1	gap2	ATCEA4C19193_1	87							
159917	ATU021857	ATL8C43942:78..441	gap2	ATCEA4S27391	87							
159918	ATU021858	ATL8C48366:339..722	gap2	ATCEA4C48408_1	87							
159919	ATU021859	ATL8C30528:448..546	gap2	ATCEA4S11004	87							
159920	ATU021860	ATL8C36205:1582..1795	gap2	ATCEA4C14325_1	87							
159921	ATU021861	ATL8S24164:198..1	gap2	ATCEA4S34678	87							
159922	ATU021	ATL8C3	gap2	ATCEA4	87							

	862	0534:1..175		C3091_1								
159923	ATU021863	ATL8C41073:246..1	gap2	ATCEA4C82396_1	87							
159924	ATU021864	ATL8C35397:295..587	gap2	ATCEA4S26678	87							
159925	ATU021865	ATL8S11418:242..341	gap2	ATCEA4C45498_1	87							
159926	ATU021866	ATL8S16176:359..578	gap2	ATCEA4C60307_1, ATCEA4C60307_2	87, 83							
159927	ATU021867	ATL8C46560:358..1	gap2	ATCEA4S5531	87							
159928	ATU021868	ATL8S3507:1..290	gap2	ATCEA4S31845, ATCEA4S5542	87, 84							
159929	ATU021869	ATL8C37732:1648..1721	gap2	ATCEA4C41311_1	87							
159930	ATU021870	ATL8C12791:1207..1434	gap2	ATCEA4S29843	87							
159931	ATU021871	ATL8C38062:4810..4732	gap2	ATCEA4C5837_12	87							
159932	ATU021	ATL8S2	gap2	ATCEA4	87							

	872	4621:602..363		S13064								
159933	ATU021873	ATL8C30813:122..794	gap2	ATCEA4C27163_1	87							
159934	ATU021874	ATL8C34200:290..489	gap2	ATCEA4C30422_1	87							
159935	ATU021875	ATL8S21827:379..306	gap2	ATCEA4C36529_1	87							
159936	ATU021876	ATL8C16722:739..291	gap2	ATCEA4C37866_1	87							
159937	ATU021877	ATL8C24293:388..516	gap2	ATCEA4C28847_1	87							
159938	ATU021878	ATL8C35702:322..1	gap2	ATCEA4C1278_3	87							
159939	ATU021879	ATL8C30908:1053..1245	gap2	ATCEA4S1201	87							
159940	ATU021880	ATL8S24951:599..264	gap2	ATCEA4S2804	87							
159941	ATU021881	ATL8C23758:23..424	gap2	ATCEA4S12925	87							
159942	ATU021882	ATL8C46624:4057..3	gap2	ATCEA4S352	87							

		755										
159943	ATU021883	ATL8C34301:782..1224	gap2	ATCEA4S18171	87							
159944	ATU021884	ATL8C34268:1139..527	gap2	ATCEA4S28377	87							
159945	ATU021885	ATL8C34229:831..596	gap2	ATCEA4S179	87							
159946	ATU021886	ATL8S6985:289..1	gap2	ATCEA4C89534_1	87							
159947	ATU021887	ATL8C17982:1574..3492	gap2	ATCEA4S81	86			g4567296	100	2137		(AC006918) putative Athila retroelement ORF1 protein [Arabidopsis thaliana]
159948	ATU021888	ATL8C33725:474..193	gap2	ATCEA4S32576	87							
159949	ATU021889	ATL8S20861:60..305	gap2	ATCEA4C8180_1, ATCEA4S3175	87, 86							
159950	ATU021	ATL8C3	gap2	ATCEA4	87							

	890	3701:1..354		S17951								
159951	ATU021891	ATL8C33561:1..212	gap2	ATCEA4C2101_1, ATCEA4S18367	87, 86							
159952	ATU021892	ATL8C10969:152..1	gap2	ATCEA4C22482_1	87							
159953	ATU021893	ATL8C3345:299..1	gap2	ATCEA4S30714	87							
159954	ATU021894	ATL8C46638:621..482	gap2	ATCEA4S253	87							
159955	ATU021895	ATL8C46667:1111..852	gap2	ATCEA4S2329	87							
159956	ATU021896	ATL8C1810:917..1248	gap2	ATCEA4S24730, ATCEA4S35012	87, 84							
159957	ATU021897	ATL8C33309:875..964	gap2	ATCEA4S29924	87							
159958	ATU021898	ATL8C33198:1150..875	gap2	ATCEA4S178	87							
159959	ATU021899	ATL8C31346:1..419	gap2	ATCEA4C8150_1	87							
159960	ATU021900	ATL8C33184:11021..1	gap2	ATCEA4C52971_1	87							

		07										
159961	ATU021901	ATL8C33135:1014..1142	gap2	ATCEA4S12699, ATCEA4S370	87, 86							
159962	ATU021902	ATL8C3104:1658..2990	gap2	ATCEA4S5186	86			g3033395	100	464	1.5e-48	(AC004238) putative zinc-finger protein [Arabidopsis thaliana]
159963	ATU021903	ATL8S26238:257..505	gap2	ATCEA4S14488	87							
159964	ATU021904	ATL8C31005:515..646	gap2	ATCEA4S26380	87							
159965	ATU021905	ATL8C31036:786..1269	gap2	ATCEA4S3937	87							
159966	ATU021906	ATL8S26354:486..284	gap2	ATCEA4S18603	87							
159967	ATU021907	ATL8S20604:124..1	gap2	ATCEA4C3273_1	87							
159968	ATU021908	ATL8C31044:1576..1	gap2	ATCEA4S126	87							

		214										
159969	ATU021909	ATL8S9195:147..1	gap2	ATCEA4C3273_1	87							
159970	ATU021910	ATL8C46196:1515..1658	gap2	ATCEA4C25369_1	87							
159971	ATU021911	ATL8S26494:235..496	gap2	ATCEA4S11406	87							
159972	ATU021912	ATL8C32627:300..1	gap2	ATCEA4S13008	87							
159973	ATU021913	ATL8C32278:1..362	gap2	ATCEA4S14145	87							
159974	ATU021914	ATL8C32266:247..1	gap2	ATCEA4S12209	87							
159975	ATU021915	ATL8S9208:116..1	gap2	ATCEA4C41425_1	87							
159976	ATU021916	ATL8C31924:2309..2114	gap2	ATCEA4S18166	87							
159977	ATU021917	ATL8C11294:2332..2666	gap2	ATCEA4S12209	87							
159978	ATU021918	ATL8S26804:339..443	gap2	ATCEA4S32108	87							
159979	ATU021919	ATL8S4798:1..491	gap2	ATCEA4S13328,ATCEA4	87, 85							

				S10659								
159980	ATU021920	ATL8C31701:107..451	gap2	ATCEA4C81930_1	87							
159981	ATU021921	ATL8S1557:450..1	gap2	ATCEA4C254_1	87							
159982	ATU021922	ATL8C21244:188..2050	gap2	ATCEA4S11082	86			g3695396	100	1809	1.8e-147	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
159983	ATU021923	ATL8C23832:1368..1626	gap2	ATCEA4S34616	87							
159984	ATU021924	ATL8C28586:1..393	gap2	ATCEA4C35189_1	87							
159985	ATU021925	ATL8C39879:2063..1712	gap2	ATCEA4C247_1	87							

159986	ATU0219 26	ATL8C31304:2468..2313	gap2	ATCEA4C89871_1	87							
159987	ATU0219 27	ATL8C12336:971..1216	gap2	ATCEA4S3079	87							
159988	ATU0219 28	ATL8S2752:115..1	gap2	ATCEA4S7691	87							
159989	ATU0219 29	ATL8C12325:224..60	gap2	ATCEA4S2737	87							
159990	ATU0219 30	ATL8S17638:101..1	gap2	ATCEA4S3843, ATCEA4S20719, ATCEA4S16304, ATCEA4S14188, ATCEA4S14094, ATCEA4S14330, ATCEA4S14197, ATCEA4S15774, ATCEA4S437	87, 86, 86, 85, 85, 84, 83, 82, 82							
159991	ATU021	ATL8C2	gap2	ATCEA4	87							

	931	877:450..974		S33637								
159992	ATU021932	ATL8C16695:1579..1860	gap2	ATCEA4S3977	87							
159993	ATU021933	ATL8C16777:1732..1270	gap2	ATCEA4S28941	87							
159994	ATU021934	ATL8C6154:905..611	gap2	ATCEA4S2635, ATCEA4S21391	87, 84							
159995	ATU021935	ATL8C1709:1..606	gap2	ATCEA4C45277_1	87							
159996	ATU021936	ATL8S27860:345..1	gap2	ATCEA4C7141_1	87							
159997	ATU021937	ATL8S27909:241..1	gap2	ATCEA4S16341	87							
159998	ATU021938	ATL8C17683:660..267	gap2	ATCEA4S5204	87							
159999	ATU021939	ATL8C19903:439..213	gap2	ATCEA4C78712_1	87							
160000	ATU021940	ATL8C2746:6664..5515	gap2	ATCEA4S5087	87							
160001	ATU021941	ATL8S6268:1..234	gap2	ATCEA4C30849_1	87							
160002	ATU021942	ATL8C2745:14	gap2	ATCEA4S344	87							

		1..428										
160003	ATU021943	ATL8S2833:1..214	gap2	ATCEA4S26361	87							
160004	ATU021944	ATL8C10393:772..911	gap2	ATCEA4S253	87							
160005	ATU021945	ATL8C18319:501..239	gap2	ATCEA4S126	87							
160006	ATU021946	ATL8C2734:1295..976	gap2	ATCEA4S32791	87							
160007	ATU021947	ATL8C49777:2133..837	gap2	ATCEA4C136930_1, ATCEA4C100513_1	86, 83			g3461819	100	1792	6.1e-163	(AC004138) unknown protein [Arabidopsis thaliana]
160008	ATU021948	ATL8C273:747..1009	gap2	ATCEA4S11441	87							
160009	ATU021949	ATL8C27297:596..293	gap2	ATCEA4S352	87							
160010	ATU021950	ATL8C25615:1827..1750	gap2	ATCEA4C28818_2	87							
160011	ATU021951	ATL8C46942:688..41	gap2	ATCEA4S31224	87							

		0										
160012	ATU021952	ATL8C18384:985..678	gap2	ATCEA4S12276	87							
160013	ATU021953	ATL8C22859:2579..3088	gap2	ATCEA4S36256, ATCEA4C491_1	87, 84							
160014	ATU021954	ATL8C41407:3287..3174	gap2	ATCEA4S12828	87							
160015	ATU021955	ATL8C14540:506..1	gap2	ATCEA4C17771_1, ATCEA4S8963	87, 85							
160016	ATU021956	ATL8S29300:65..188	gap2	ATCEA4S31092	87							
160017	ATU021957	ATL8C27078:149..427	gap2	ATCEA4S10749	87							
160018	ATU021958	ATL8C27066:625..259	gap2	ATCEA4C43541_1	87							
160019	ATU021959	ATL8C4142:1262..1503	gap2	ATCEA4S1061	87							
160020	ATU021960	ATL8C18756:380..808	gap2	ATCEA4C10643_1	87							
160021	ATU021961	ATL8C10516:5	gap2	ATCEA4C14118	87							

		46..12		1								
160022	ATU021962	ATL8S29778:56..152	gap2	ATCEA4S32586	87							
160023	ATU021963	ATL8C18899:607..448	gap2	ATCEA4S444	87							
160024	ATU021964	ATL8C26943:392..1	gap2	ATCEA4S5273	87							
160025	ATU021965	ATL8C18944:458..597	gap2	ATCEA4S253	87							
160026	ATU021966	ATL8C19018:1126..548	gap2	ATCEA4C33747_1	87							
160027	ATU021967	ATL8C1177:399..38	gap2	ATCEA4S5249	87							
160028	ATU021968	ATL8S3004:100..203	gap2	ATCEA4S28935	87							
160029	ATU021969	ATL8C44835:771..428	gap2	ATCEA4S178	87							
160030	ATU021970	ATL8C19329:3049..3308	gap2	ATCEA4S27399	87							
160031	ATU021971	ATL8C19329:2306..2167	gap2	ATCEA4S253	87							
160032	ATU021972	ATL8C19721:677..77	gap2	ATCEA4S19596	87							

		4										
160033	ATU021973	ATL8C26566:2602..2512	gap2	ATCEA4S566	87							
160034	ATU021974	ATL8C20256:328..1	gap2	ATCEA4S25262	87							
160035	ATU021975	ATL8C10839:1173..1540	gap2	ATCEA4S17561	87							
160036	ATU021976	ATL8C37108:1..364	gap2	ATCEA4S17518, ATCEA4S20352	87, 84							
160037	ATU021977	ATL8C10865:2383..2776	gap2	ATCEA4S32891	87							
160038	ATU021978	ATL8C37131:104..999	gap2	ATCEA4S25793, ATCEA4C409_1	87, 86							
160039	ATU021979	ATL8C20611:723..463	gap2	ATCEA4S26056	87							
160040	ATU021980	ATL8C47084:1..139	gap2	ATCEA4S12319	87							
160041	ATU021981	ATL8C11587:1902..1311	gap2	ATCEA4S15423	87							
160042	ATU021982	ATL8C1089:379..81	gap2	ATCEA4S11510	87							

160043	ATU021983	ATL8C47128:677..1067	gap2	ATCEA4S11794	87							
160044	ATU021984	ATL8C20811:5016..5481	gap2	ATCEA4S24050	87							
160045	ATU021985	ATL8C47151:345..91	gap2	ATCEA4S13901	87							
160046	ATU021986	ATL8C10927:830..958	gap2	ATCEA4S253	87							
160047	ATU021987	ATL8C5155:1337..1035	gap2	ATCEA4S29179	87							
160048	ATU021988	ATL8S3112:171..310	gap2	ATCEA4S12860	87							
160049	ATU021989	ATL8C25611:656..781	gap2	ATCEA4S26440	87							
160050	ATU021990	ATL8S9515:415..107	gap2	ATCEA4C22735_1	87							
160051	ATU021991	ATL8C4165:330..815	gap2	ATCEA4C28065_1	87							
160052	ATU021992	ATL8C21309:1..491	gap2	ATCEA4C94213_1	87							
160053	ATU021993	ATL8C21348:1..337	gap2	ATCEA4C120855_1	87							
160054	ATU021994	ATL8C21368:3	gap2	ATCEA4C7811	87							

		45..13 15		1								
160055	ATU021 995	ATL8C1 0957:5 804..6 063	gap2	ATCEA4 S16575	87							
160056	ATU021 996	ATL8S3 0789:3 25..23 8	gap2	ATCEA4 C29513 _1	87							
160057	ATU021 997	ATL8C2 1537:1 896..1 627	gap2	ATCEA4 S34903	87							
160058	ATU021 998	ATL8C2 1667:3 613..3 256	gap2	ATCEA4 S25982	87							
160059	ATU021 999	ATL8C5 0216:8 98..1	gap2	ATCEA4 C11833 4_1	87							
160060	ATU022 000	ATL8S1 5237:8 5..224	gap2	ATCEA4 C8198_ 1	87							
160061	ATU022 001	ATL8C1 1000:1 102..7 46	gap2	ATCEA4 S11406	87							
160062	ATU022 002	ATL8C4 4592:1 399..1 124	gap2	ATCEA4 C13376 _1	87							
160063	ATU022 003	ATL8C4 7399:2 89..1	gap2	ATCEA4 C10821 8_1	87							
160064	ATU022 004	ATL8C2 1801:1 038..1 470	gap2	ATCEA4 S27130 , ATCEA4 S14984	87, 85							

160065	ATU022005	ATL8C49596:1439..1610	gap2	ATCEA4C799_1	87							
160066	ATU022006	ATL8C37495:672..128	gap2	ATCEA4C3372_1	87							
160067	ATU022007	ATL8C25223:986..1598	gap2	ATCEA4C10985_1	87							
160068	ATU022008	ATL8C41794:1869..1526	gap2	ATCEA4S178	87							
160069	ATU022009	ATL8C25141:331..397	gap2	ATCEA4S36305	87							
160070	ATU022010	ATL8C11105:318..625	gap2	ATCEA4S25388	87							
160071	ATU022011	ATL8S18667:5..509	gap2	ATCEA4C936381	87							
160072	ATU022012	ATL8S17995:1..327	gap2	ATCEA4S13702	87							
160073	ATU022013	ATL8S17860:410..277	gap2	ATCEA4S14662	87							
160074	ATU022014	ATL8C29248:1592..226	gap2	ATCEA4S17283	86			g4217998	100	1485	2.2e-147	(AC006135) putative geranylgeran

												yl pyrophosphate synthase [Arabidopsis thaliana]
160075	ATU0220015	ATL8S30829:1..155	gap2	ATCEA4C2732_1	87							
160076	ATU0220016	ATL8S17790:194..446	gap2	ATCEA4S33664	87							
160077	ATU0220017	ATL8C1655:1402..1126	gap2	ATCEA4S29504	87							
160078	ATU0220018	ATL8S4036:555..379	gap2	ATCEA4S14662	87							
160079	ATU0220019	ATL8C41342:5969..5877	gap2	ATCEA4S27369	87							
160080	ATU0220020	ATL8C4511:931..1120	gap2	ATCEA4S25996	87							
160081	ATU0220021	ATL8S15483:392..625	gap2	ATCEA4C29232_1	87							
160082	ATU0220022	ATL8S15056:176..324	gap2	ATCEA4C154940_1	87							

160083	ATU022023	ATL8S15002:120..214	gap2	ATCEA4S36305	87							
160084	ATU022024	ATL8S14100:108..1	gap2	ATCEA4S36369	87							
160085	ATU022025	ATL8C16440:509..391	gap2	ATCEA4S26628	87							
160086	ATU022026	ATL8C16428:125..1	gap2	ATCEA4S3087	87							
160087	ATU022027	ATL8S13497:144..1	gap2	ATCEA4S19358	87							
160088	ATU022028	ATL8C14480:15..699	gap2	ATCEA4S23141,ATCEA4S14684	87, 82							
160089	ATU022029	ATL8C39171:6426..7914	gap2	ATCEA4S11406,ATCEA4C40880_1	87, 87							
160090	ATU022030	ATL8C40942:139..1	gap2	ATCEA4C25921_1	87							
160091	ATU022031	ATL8S13275:1..282	gap2	ATCEA4C51285_1	87							
160092	ATU022032	ATL8S4844:1..232	gap2	ATCEA4S11424	87							
160093	ATU022033	ATL8C40880:276..1	gap2	ATCEA4S10007	87							

160094	ATU022034	ATL8C40870:559..176	gap2	ATCEA4C151629_1	87							
160095	ATU022035	ATL8S12478:327..443	gap2	ATCEA4S3483	87							
160096	ATU022036	ATL8C40745:443..123	gap2	ATCEA4C93191_1	87							
160097	ATU022037	ATL8S12305:383..603	gap2	ATCEA4S4721	87							
160098	ATU022038	ATL8S12027:85..1	gap2	ATCEA4S35993	87							
160099	ATU022039	ATL8S11673:1..181	gap2	ATCEA4S36262	87							
160100	ATU022040	ATL8S5720:341..520	gap2	ATCEA4C160869_1	87							
160101	ATU022041	ATL8S5771:371..1	gap2	ATCEA4S24405	87							
160102	ATU022042	ATL8C13564:4844..5333	gap2	ATCEA4S3937	87							
160103	ATU022043	ATL8S11244:387..315	gap2	ATCEA4C37453_1	87							
160104	ATU022044	ATL8C40698:295..602	gap2	ATCEA4S13901	87							

160105	ATU022045	ATL8C24860:27..400	gap2	ATCEA4S344	87							
160106	ATU022046	ATL8S11475:211..98	gap2	ATCEA4S14662	87							
160107	ATU022047	ATL8C47812:1419..1292	gap2	ATCEA4C9111_1	87							
160108	ATU022048	ATL8S5971:104..1	gap2	ATCEA4S14683	87							
160109	ATU022049	ATL8C1116:345..245	gap2	ATCEA4C3357_3	87							
160110	ATU022050	ATL8C11303:121..1	gap2	ATCEA4C80764_1	87							
160111	ATU022051	ATL8C22538:1400..1831	gap2	ATCEA4S4080	87							
160112	ATU022052	ATL8C42311:1191..790	gap2	ATCEA4C20463_1	87							
160113	ATU022053	ATL8S10927:82..1	gap2	ATCEA4S35993	87							
160114	ATU022054	ATL8C40658:491..778	gap2	ATCEA4S11519	87							
160115	ATU022055	ATL8S1050:203..464	gap2	ATCEA4S13901	87							
160116	ATU022056	ATL8C44438:278..75	gap2	ATCEA4S35405,	87, 87, 85							

		3		ATCEA4S33907, ATCEA4S32718								
160117	ATU022057	ATL8S10370:1..177	gap2	ATCEA4S5302	87							
160118	ATU022058	ATL8S10222:1..114	gap2	ATCEA4C764191	87							
160119	ATU022059	ATL8C40637:392..1	gap2	ATCEA4S32219	87							
160120	ATU022060	ATL8C24810:868..487	gap2	ATCEA4S11794	87							
160121	ATU022061	ATL8C40606:142..1	gap2	ATCEA4S11737	87							
160122	ATU022062	ATL8C9982:93..1	gap2	ATCEA4S1691	87							
160123	ATU022063	ATL8C9786:903..673	gap2	ATCEA4S178	87							
160124	ATU022064	ATL8C4558:4585..4314	gap2	ATCEA4S14268	87							
160125	ATU022065	ATL8C14747:2849..2550	gap2	ATCEA4S11510	87							
160126	ATU022066	ATL8S6602:1..347	gap2	ATCEA4S14406	87							
160127	ATU022067	ATL8C9598:78	gap2	ATCEA4S11279	87							

		0..442										
160128	ATU022068	ATL8C9482:446..750	gap2	ATCEA4S352	87							
160129	ATU022069	ATL8C9209:4321..3963	gap2	ATCEA4S27391	87							
160130	ATU022070	ATL8C8863:1..755	gap2	ATCEA4S937	87							
160131	ATU022071	ATL8C42467:1609..1472	gap2	ATCEA4S253	87							
160132	ATU022072	ATL8C8656:1981..1857	gap2	ATCEA4S166	87							
160133	ATU022073	ATL8S29372:1..439	gap2	ATCEA4C10356_1, ATCEA4S15767	87, 87							
160134	ATU022074	ATL8C8528:261..910	gap2	ATCEA4S1741	87							
160135	ATU022075	ATL8C38080:238..337	gap2	ATCEA4C6276_1	87							
160136	ATU022076	ATL8C8412:1..362	gap2	ATCEA4C136574_1	87							
160137	ATU022077	ATL8C22772:312..150	gap2	ATCEA4S9902	87							
160138	ATU022078	ATL8C45292:2	gap2	ATCEA4S8366	87							

		91..67										
160139	ATU022079	ATL8C42726:1384..1512	gap2	ATCEA4S26778	87							
160140	ATU022080	ATL8C42747:335..52	gap2	ATCEA4S6047	87							
160141	ATU022081	ATL8C8291:273..399	gap2	ATCEA4S15196	87							
160142	ATU022082	ATL8C8280:1122..749	gap2	ATCEA4S11479	87							
160143	ATU022083	ATL8C22808:6601..6740	gap2	ATCEA4S253	87							
160144	ATU022084	ATL8C8052:447..277	gap2	ATCEA4S25844	87							
160145	ATU022085	ATL8C7334:656..853	gap2	ATCEA4S11326	87							
160146	ATU022086	ATL8C733:373..1	gap2	ATCEA4S9533	87							
160147	ATU022087	ATL8C7217:5249..4880	gap2	ATCEA4S203	87							
160148	ATU022088	ATL8C2957:1497..1590	gap2	ATCEA4S17749	87							
160149	ATU022089	ATL8C13534:1..374	gap2	ATCEA4S16854	87							

160150	ATU0220 90	ATL8S7687:77..1	gap2	ATCEA4S35993	87							
160151	ATU0220 91	ATL8C40270:2428..2069	gap2	ATCEA4S27391	87							
160152	ATU0220 92	ATL8C24797:3176..2778	gap2	ATCEA4C75380_1	87							
160153	ATU0220 93	ATL8C40268:383..145	gap2	ATCEA4S3937	87							
160154	ATU0220 94	ATL8C663:565..257	gap2	ATCEA4S5698	87							
160155	ATU0220 95	ATL8C660:1097..790	gap2	ATCEA4S13901	87							
160156	ATU0220 96	ATL8C6244:694..356	gap2	ATCEA4C165223_1	87							
160157	ATU0220 97	ATL8C12144:322..1075	gap2	ATCEA4C116144_1	87							
160158	ATU0220 98	ATL8S8140:1..156	gap2	ATCEA4S31986, ATCEA4S31905, ATCEA4C1063_5, ATCEA4C1063_4	87, 85, 85, 84							

160159	ATU0220 99	ATL8C39892:5445..5083	gap2	ATCEA4S126	87							
160160	ATU0220 100	ATL8C42910:2708..4749	gap2	ATCEA4S4078	87							
160161	ATU0220 101	ATL8C5372:2000..1502	gap2	ATCEA4S31036	87							
160162	ATU0220 102	ATL8C22956:1840..1362	gap2	ATCEA4S4080	87							
160163	ATU0220 103	ATL8S9476:713..431	gap2	ATCEA4C740_3, ATCEA4C740_1	87, 86							
160164	ATU0220 104	ATL8C45837:1..366	gap2	ATCEA4C542791	87							
160165	ATU0220 105	ATL8C39876:71..470	gap2	ATCEA4S13054	87							
160166	ATU0220 106	ATL8C515:7914..7656	gap2	ATCEA4S16887	87							
160167	ATU0220 107	ATL8C45869:85..1	gap2	ATCEA4S2434	87							
160168	ATU0220 108	ATL8C24700:1345..1698	gap2	ATCEA4S178	87							
160169	ATU0220 109	ATL8S20925:1	gap2	ATCEA4S11555	87							

		1..354										
160170	ATU022110	ATL8S2100:564..455	gap2	ATCEA4S14662	87							
160171	ATU022111	ATL8C5081:117..668	gap2	ATCEA4S15134	87							
160172	ATU022112	ATL8C49778:272..521	gap2	ATCEA4S23304	87							
160173	ATU022113	ATL8C49675:1579..2380	gap2	ATCEA4C119441_1	87							
160174	ATU022114	ATL8C29717:316..6	gap2	ATCEA4S27399	87							
160175	ATU022115	ATL8C49464:791..1068	gap2	ATCEA4S12260	87							
160176	ATU022116	ATL8C49410:472..255	gap2	ATCEA4S10889	87							
160177	ATU022117	ATL8C49026:1366..1193	gap2	ATCEA4S273	87							
160178	ATU022118	ATL8C48968:750..1089	gap2	ATCEA4S28754	87							
160179	ATU022119	ATL8S21379:401..146	gap2	ATCEA4S25874	87							
160180	ATU022120	ATL8C48817:3	gap2	ATCEA4S35833	87							

		41..63										
160181	ATU022121	ATL8C3959:149..1	gap2	ATCEA4S4673	87							
160182	ATU022122	ATL8C48450:1..476	gap2	ATCEA4S33276	87							
160183	ATU022123	ATL8C4824:1497..1905	gap2	ATCEA4S34863	87							
160184	ATU022124	ATL8C15642:841..477	gap2	ATCEA4S12756	87							
160185	ATU022125	ATL8S28954:16..387	gap2	ATCEA4S31562, ATCEA4S31369	87, 87							
160186	ATU022126	ATL8C46042:2893..3023	gap2	ATCEA4S4726	87							
160187	ATU022127	ATL8C43530:2241..1856	gap2	ATCEA4C21477_2, ATCEA4S18993, ATCEA4C214773	87, 85, 82							
160188	ATU022128	ATL8C39021:1168..1037	gap2	ATCEA4S30422	87							
160189	ATU022129	ATL8C43528:1437..8	gap2	ATCEA4C229122,	87, 86							

		04		ATCEA4C22912_1								
160190	ATU022130	ATL8C39004:564..1102	gap2	ATCEA4C117944_1	87							
160191	ATU022131	ATL8C38853:607..456	gap2	ATCEA4S11115	87							
160192	ATU022132	ATL8C38842:105..1	gap2	ATCEA4S26726	87							
160193	ATU022133	ATL8S22071:584..373	gap2	ATCEA4C8200_1	87							
160194	ATU022134	ATL8C48180:2045..1493	gap2	ATCEA4S34931	87							
160195	ATU022135	ATL8C34156:417..1	gap2	ATCEA4C76479_1	87							
160196	ATU022136	ATL8C21913:1..596	gap2	ATCEA4C233_1, ATCEA4C233_2	87, 84							
160197	ATU022137	ATL8C4344:217..1	gap2	ATCEA4C26498_1	87							
160198	ATU022138	ATL8C38730:1..103	gap2	ATCEA4S28738	87							
160199	ATU022139	ATL8C38699:1684..1805	gap2	ATCEA4S33518	87							

160200	ATU022140	ATL8S22053:74..1	gap2	ATCEA4S35993	87							
160201	ATU022141	ATL8C20937:172..540	gap2	ATCEA4C9200_1	87							
160202	ATU022142	ATL8S989:351..94	gap2	ATCEA4S12490	87							
160203	ATU022143	ATL8C32395:5378..6042	gap2	ATCEA4C30459_1	87							
160204	ATU022144	ATL8C38630:1027..626	gap2	ATCEA4S20339	87							
160205	ATU022145	ATL8S31042:112..260	gap2	ATCEA4S17804	87							
160206	ATU022146	ATL8C49247:2923..1324	gap2	ATCEA4C63542_1	86	ATL8C49247:2251..1324	0.95	g3080370	99	591	3.0e-38	(AL022580) hypothetical protein [Arabidopsis thaliana]
160207	ATU022147	ATL8C47998:2874..1265	gap2	ATCEA4S31689	86	ATL8C47998:2874..1472	0.92	g2341040	99	461	3.2e-25	(AC000104) EST gb|H76414 comes from this

												gene. [Arabidopsis thaliana]
160208	ATU022148	ATL8C45621:609..1576	gap2	ATCEA4S10657	86	ATL8C45621:665..1576	0.92	g3182915	99	439	8.1e-47	ADP-RIBOSYLATION FACTOR [Dugesia japonica]
160209	ATU022149	ATL8C19420:95..2796	gap2	ATCEA4S36192	86	ATL8C19420:2158..2534	0.90	g2982435	99	688	1.0e-69	(AL022224) retrotransposon like protein (fragment) [Arabidopsis thaliana]
160210	ATU022150	ATL8C21982:568..1870	gap2	ATCEA4S34286	86	ATL8C21982:568..1870	0.88	g1888557	99	605	3.9e-61	(U89841) diadenosine 5',5'''-P1,P4-tetraphosphate hydrolase [Lupin

												us angustifolius]
160211	ATU022151	ATL8C38018:1255..613	gap2	ATCEA4S30147	86	ATL8C38018:1147..752	0.54	g3785983	99	305	1.3e-32	(AC005560) hypothetical protein [Arabidopsis thaliana]
160212	ATU022152	ATL8C10299:348..3773	gap2	ATCEA4S30852	86	ATL8C10299:348..3424	0.53	g3047101, g3047111	99, 79	666, 1664		(AF058919) Similar to protein kinase; coded for by A. thaliana cDNA H36947; coded for by A. thaliana cDNA H37158 [Arabidopsis thalia

												na]; (AF058919) No definition line found [Arabidopsis thaliana]
160213	ATU022153	ATL8C16412:113..724	gap2	ATCEA4C29794_10	86	ATL8C16412:113..724	0.49	g628011	99	79	0.39	mucin-like protein - rat (fragment) [Rattus sp.]
160214	ATU022154	ATL8C31226:3668..1840	gap2	ATCEA4S11082	86	ATL8C31226:3539..2471	0.40	g3695396	99	1782	9.0e-156	(AF096372) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis

												thaliana]
160215	ATU022155	ATL8C36200:2970..3565	gap2	ATCEA4C21512_1	86			g541928	99	136	4.2e-06	SaTAP35 protein - white mustard [Sinapis alba]
160216	ATU022156	ATL8C22842:390..2050	gap2	ATCEA4S32603	86			g3063462, g4558663	99, 63	822, 192	1.9e-80, 2.8e-09	(AC003981) F22013.24 [Arabidopsis thaliana]; (AC007063) unknown protein [Arabidopsis thaliana]
160217	ATU022157	ATL8C12808:1515..1989	gap2	ATCEA4S29918	86			g4733999	99	120	1.0e-09	(AC007187) hypothetical protein [Arabidopsis thaliana]

160218	ATU0221 58	ATL8C14 807:161..897	gap2	ATCEA4S11227, ATCEA4S12133	86, 85			g1262623	98	94	0.00024	(D17510) ORF46c [Pinus thunbergii]
160219	ATU0221 59	ATL8C22 614:1029..1	gap2	ATCEA4S5200	86	ATL8C22 614:859..46	0.43	g2262162	96	397	7.9e-50	(AC002329) hypothetical protein similar to A. thaliana protein F19K23.19 [Arabidopsis thaliana]
160220	ATU0221 60	ATL8C36 748:2009..1	gap2	ATCEA4S7897	86	ATL8C36 748:1909..576	0.70	g1946361	94	990	3.3e-91	(U93215) C3HC4 zinc finger protein isolog [Arabidopsis thaliana]
160221	ATU0221 61	ATL8C869:2760..1	gap2	ATCEA4S1582	86	ATL8C869:2760..15	0.84	g4049353	91	2265	6.4e-182	(AL034567) putati

												ve protein [Arabidopsis thaliana]
160222	ATU0221 62	ATL8C35000:1..506	gap2	ATCEA4S36192	86	ATL8C35000:88..243	0.99	g4734004	90	378	5.1e-33	(AC007178) putative reverse transcriptase [Arabidopsis thaliana]
160223	ATU0221 63	ATL8C14740:6278..9057	gap2	ATCEA4S5805	86	ATL8C14740:6278..8879	0.81	g3152572	89	482	1.7e-26	(AC002986) Contains homology to DNAJ heatshock protein gb|U32803 from Haemophilus influenzae. [Arabidopsis

												thaliana]
160224	ATU022164	ATL8C48993:1..1359	gap2	ATCEA4C80020_1	86	ATL8C48993:47..1320	0.56	g4539445	88	1924	8.3e-177	(AL049523) putative protein [Arabidopsis thaliana]
160225	ATU022165	ATL8C8215:1885..196	gap2	ATCEA4S30602	86	ATL8C8215:1578..196	0.78	g4056460	87	1505	3.3e-153	(AC005990) Contains similarity to gb|L26505 Met30p from Saccharomyces cerevisiae. ESTs gb|F14133, gb|T46217, gb|AA404758 and gb|Z37647 come from

												this gene. [Arabidopsis thaliana]
160226	ATU0221 66	ATL8C48194:1..3914	gap2	ATCEA4S15016, ATCEA4C81387_1, ATCEA4C7853_1	86, 84, 82	ATL8C48194:476..3737	0.76	g1419758, g2326342	86, 73	966, 706	2.3e-87, 3.2e-53	(X98795) geranylgeranyl pyrophosphate synthase [Sinapis alba]; (Y11187) Terpene cyclase, TC1 [Arabidopsis thaliana]
160227	ATU0221 67	ATL8C30751:718..1	gap2	ATCEA4S1596	86	ATL8C30751:560..11	0.85	g2058504	85	740	1.4e-52	(U76554) zinc-finger protein-1 [Brassica rapa]
160228	ATU0221 68	ATL8C33319:6	gap2	ATCEA4S27391	86	ATL8C33319:6	0.67	g4773918	85	1888	2.6e-133	(AF147259)

		05..3389				05..1982						No definition line found [Arabidopsis thaliana]
160229	ATU022169	ATL8S14097:1..513	gap2	ATCEA4C25755_1	86			g3805760	84	516	6.0e-36	(AC005693) unknown protein [Arabidopsis thaliana]
160230	ATU022170	ATL8C6183:1085..1	gap2	ATCEA4S7950	86	ATL8C6183:1082..413	0.98	g4572682	83	1246	3.6e-131	(AC006954) putative APG protein [Arabidopsis thaliana]
160231	ATU022171	ATL8C41846:962..1	gap2	ATCEA4S253	86	ATL8C41846:962..737	0.81	g4559361	83	399	4.9e-42	(AC006585) hypothetical protein [Arabidopsis thaliana]
160232	ATU022	ATL8S1	gap2	ATCEA4	86	ATL8S1	0.76	g44689	83	224	4.1e-	(AL035

	172	6178:657..1		S20235		6178:595..289		85			13	605) hypothetical protein [Arabidopsis thaliana]
160233	ATU022173	ATL8C42034:2132..1	gap2	ATCEA4C48671_1	86	ATL8C42034:2058..941	0.49	g2253010	83	606	1.2e-49	(Y14199) MAP3K delta-1 protein kinase [Arabidopsis thaliana]
160234	ATU022174	ATL8C3401:1..780	gap2	ATCEA4C4549_2	86			g4567208	81	220	3.1e-24	(AC007168) unknown protein [Arabidopsis thaliana]
160235	ATU022175	ATL8C44500:1..686	gap2	ATCEA4C45613_1	86			g4432834	80	178	8.0e-06	(AC006283) unknown protein [Arabidopsis thalia

												na]
160236	ATU0221 76	ATL8C47835:2096..1	gap2	ATCEA4S126	86	ATL8C47835:2096..56	0.72	g4699938	77	700	1.1e-76	(AC007166) hypothetical protein [Arabidopsis thaliana]
160237	ATU0221 77	ATL8C20178:1..1777	gap2	ATCEA4S30228	86	ATL8C20178:75..1777	0.87	g3688188	74	1968	7.4e-210	(AL031804) pyruvate decarboxylase-1 (Pdc1) [Arabidopsis thaliana]
160238	ATU0221 78	ATL8C40672:1819..825	gap2	ATCEA4S222	86	ATL8C40672:1819..831	0.66	g4589959	74	172	1.5e-12	(AC007169) hypothetical protein [Arabidopsis thaliana]
160239	ATU0221 79	ATL8C43390:1172..1	gap2	ATCEA4S14039	86	ATL8C43390:1063..313	0.51	g4587526	74	874		(AC007060) Strong similarity to F19I3.

												2 []
160240	ATU0221 80	ATL8C45645:5588..4292	gap2	ATCEA4S1297, ATCEA4S31776	86, 84			g2832629	74	585	7.4e-64	(AL021711) 4-coumarate-CoA ligase-like [Arabidopsis thaliana]
160241	ATU0221 81	ATL8C24220:100..1770	gap2	ATCEA4C65256_1	86			g3582328	73	812	7.0e-81	(AC005496) hypothetical protein [Arabidopsis thaliana]
160242	ATU0221 82	ATL8C8734:1461..60	gap2	ATCEA4S31256, ATCEA4S34266	86, 82	ATL8C8734:1364..275	0.79	g4100060	71	1949	4.0e-204	(U93161) receptor lectin kinase 3 [Arabidopsis thaliana].
160243	ATU0221 83	ATL8C24403:88..946	gap2	ATCEA4S5597	86	ATL8C24403:654..779	0.92	g2342685	70	347	1.3e-28	(AC000106) Contains similarity

												to Rhodococcus amidase (gb|D16207). ESTs gb|T20504,gb|H36650,gb|N97423,gb|H36595 come from this gene. [Arabidopsis thaliana]
160244	ATU022184	ATL8C26280:1..2890	gap2	ATCEA4S5694	86	ATL8C26280:223..2130	0.76	g4539314	69	627	5.7e-65	(AL035679) kinesin like protein [Arabidopsis thaliana]
160245	ATU022185	ATL8C29441:1..1038	gap2	ATCEA4S7594	86	ATL8C29441:436..863	0.99	g4263704	68	174	7.6e-12	(AC006223) putative sugar starvation-

												induced protein [Arabidopsis thaliana]
160246	ATU022186	ATL8C10914:1..6521	gap2	ATCEA4S126	86	ATL8C10914:313..6521	0.64	g3377816	68	2399	3.6e-210	(AF076275) contains similarity to Arabidopsis thaliana retrotransposon Athila (GB:X81801) [Arabidopsis thaliana]
160247	ATU022187	ATL8C41442:2118..922	gap2	ATCEA4S26282	86	ATL8C41442:2085..983	0.60	g322639	68	408	5.6e-37	beta-1,3-glucanase homolog (clone A20) - rape (fragment)

												[Brassica napus]
160248	ATU022188	ATL8C21398:1..1309	gap2	ATCEA4S36300	86	ATL8C21398:181..1035	0.99	g3122288	65	1301	7.1e-112	IMPORTIN ALPHA-1 SUBUNIT (KARYOPHERIN ALPHA-1 SUBUNIT) (KAP ALPHA) [Arabidopsis thaliana]
160249	ATU022189	ATL8C27350:856..2362	gap2	ATCEA4S1478, ATCEA4C25955_1	86, 82	ATL8C27350:864..2324	0.84	g4262186	65	2097		(AC005508) Highly similar to cullin 3 [Arabidopsis thaliana]
160250	ATU022190	ATL8S28777:445..1	gap2	ATCEA4C51495_1	86	ATL8S28777:381..249	1.00	g3955041	61	100	5.1e-05	(AJ010068) nhp2+ protein [Schizosaccharomyc

												es pombe]
160251	ATU022191	ATL8C19693:1..694	gap2	ATCEA4S7339	86	ATL8C19693:52..623	0.93	g4558565	61	169	0.017	(AC007138) predicted protein of unknown function [Arabidopsis thaliana]
160252	ATU022192	ATL8C12604:1509..304	gap2	ATCEA4S17430	86	ATL8C12604:1348..476	0.83	g3885335	61	1477	1.0e-132	(AC005623) ethylene-insensitive3-like protein [Arabidopsis thaliana]
160253	ATU022193	ATL8C3440:1..863	gap2	ATCEA4C9607_2	86	ATL8C3440:103..781	0.96	g1143511	60	578	1.8e-66	(Z47076) Ser/Thr protein phosphatase homologous to PPX

												[Malus domestica]
160254	ATU022194	ATL8C1211:1..1066	gap2	ATCEA4S33834	86	ATL8C1211:194..736	0.76	g4678316	59	653	1.3e-68	(AL049658) putative protein [Arabidopsis thaliana]
160255	ATU022195	ATL8C45766:124..774	gap2	ATCEA4C41970_1	86			g4455226	59	731	7.3e-63	(AL035440) putative protein [Arabidopsis thaliana]
160256	ATU022196	ATL8C14377:2208..1	gap2	ATCEA4S11794, ATCEA4S3610	86, 84			g2618694	59	252	1.9e-25	(AC002510) putative zinc-finger protein [Arabidopsis thaliana]
160257	ATU022197	ATL8C21811:659..128	gap2	ATCEA4C34904_1	86			g2245127	59	461	1.7e-36	(Z97344) hypothetical protei

												n [Arabidopsis thaliana]
160258	ATU022198	ATL8C26317:2039..84	gap2	ATCEA4S3403	86	ATL8C26317:1942..88	0.82	g3152590	58	703	3.4e-60	(AC002986) Similar to protein serine/threonine kinase NPK15 gb|D31737 from Nicotiana tabacum. [Arabidopsis thaliana]
160259	ATU022199	ATL8C49623:1411..1	gap2	ATCEA4S2785	86			g3056591	57	2317	1.2e-229	(AC004255) T1F9.12 [Arabidopsis thaliana]
160260	ATU022200	ATL8C22285:3687..1	gap2	ATCEA4S3541	86	ATL8C22285:3687..251	0.83	g4895165, g4309866	56, 35	748, 1003	1.1e-59, 3.6e-95	(AC007231) unknown protei

												n [Arabidopsis thaliana]; (AC006527) putative transposase [Arabidopsis thaliana]
160261	ATU022201	ATL8C49503:1..1080	gap2	ATCEA4S782	86			g3193309	56	400	2.4e-44	(AF069300) No definition line found [Arabidopsis thaliana]
160262	ATU022202	ATL8C16643:1..649	gap2	ATCEA4S32609	86	ATL8C16643:66..649	0.97	g2244797	55	385	9.3e-24	(Z97336) hypothetical protein [Arabidopsis thaliana]
160263	ATU022203	ATL8C5314:1..731	gap2	ATCEA4C54462_2, ATCEA4	86, 85	ATL8C5314:51..691	0.95	g4455203	55	418	1.7e-38	(AL035440) putative